ISSUE 5 SEPTEMBER 1992 £3.95

AN EMAP IMAGES PUBLICATION

ATARI ST REVIEW

WHAT'S NEW, WHAT TO BUY, WHAT TO PAY

22 PROGRAMS FREE!

SOFTWARE WORTH OVER £100

THE FALCON HAS LANDED...

WE PULL BACK THE COVERS ON ATARI'S LATEST MACHINE...

EXCLUSIVE PICTURES PAGE 8!

WIN! A HARD DRIVE!

WIN! A FAX MODEM!

PUNTER POWER

HARD DRIVES, TIME CARTRIDGES, MICE, OR MONITORS – WE FIND OUT ABOUT THE BEST BUYS!

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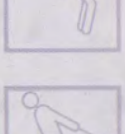

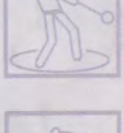

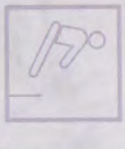

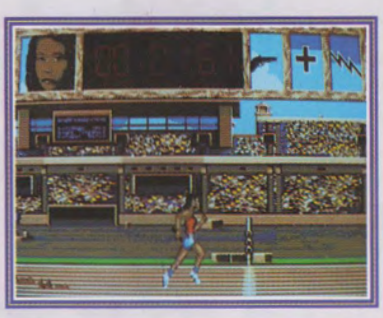

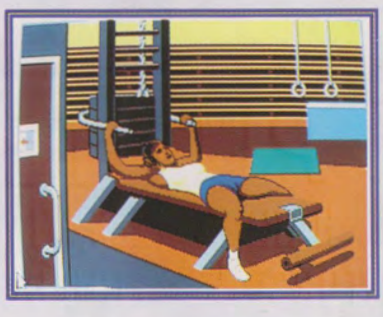

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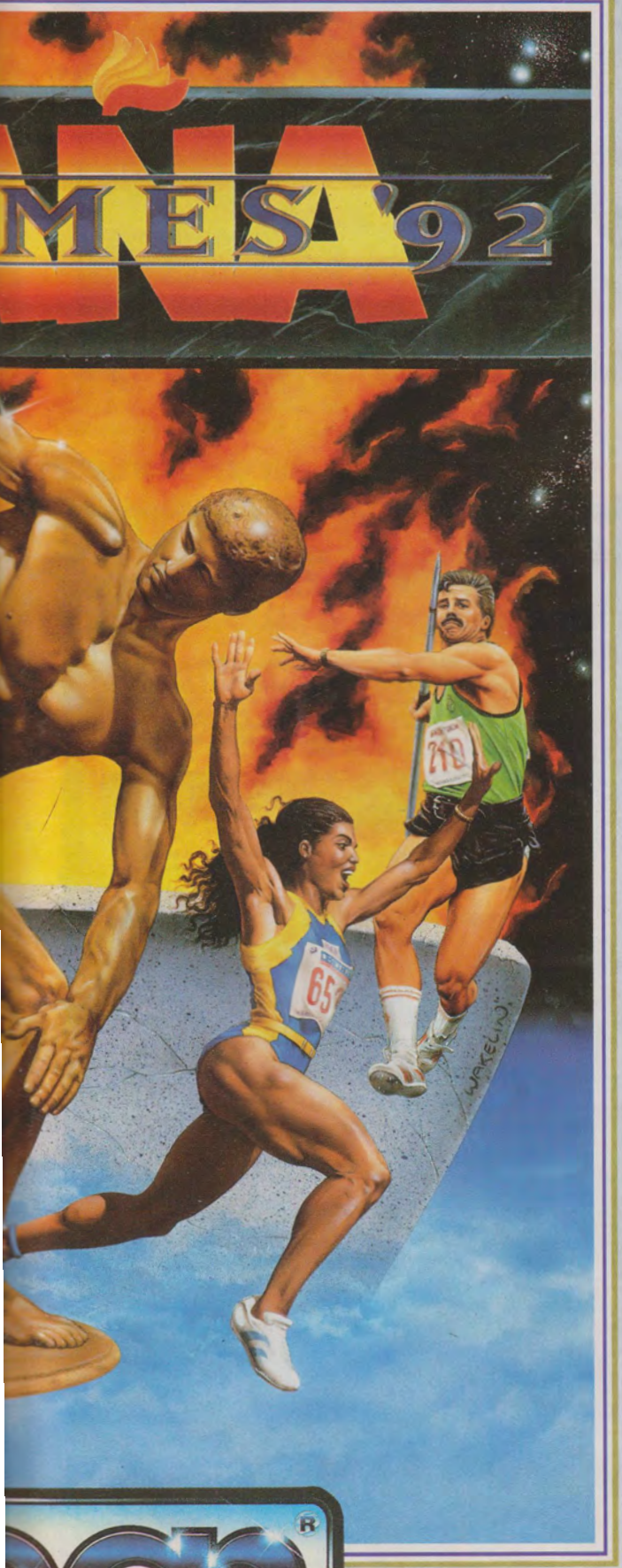
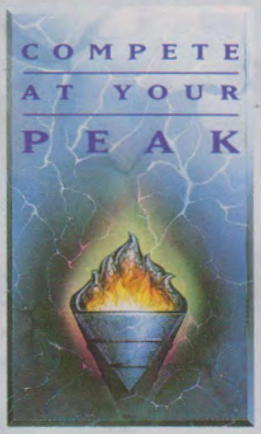
SPORTS SENSATION



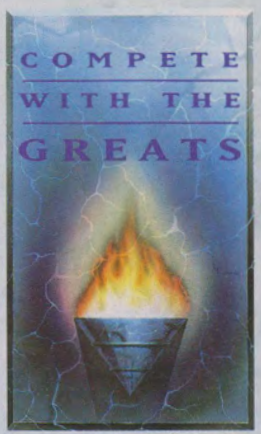
TEAM MANAGEMENT

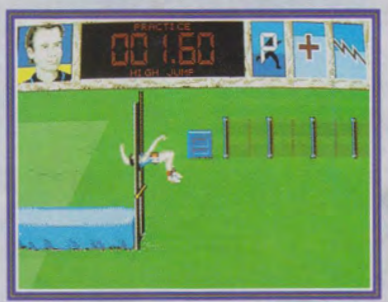
Put yourself in charge of training your squad for this summer's competition.



HALL OF FAME

Includes the history of the games and the winning contestants' achievements. Compare your team members' performances to those of the all time greats as you attempt to break world records.





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The Atari Falcon finally takes to the skies as we bring you the full technical specification of the new machine and look at exactly what the implications of the new technology will be for the domestic market.

ST REVIEW ISSUE 5
SEPTEMBER 1992

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ON THIS MONTH'S COVERDISKS

OVER £100 WORTH OF SCINTILLATING SOFTWARE

FIRST WORD PLUS

A fully working, fully featured, commercial Word Processor, First Word Plus, graces this month's coverdisk. Recognised as possibly the most popular word processor ever on the ST, we bring it to you for free along with a three part tutorial to show you how to get the absolute best out of it.

1ST TRACK

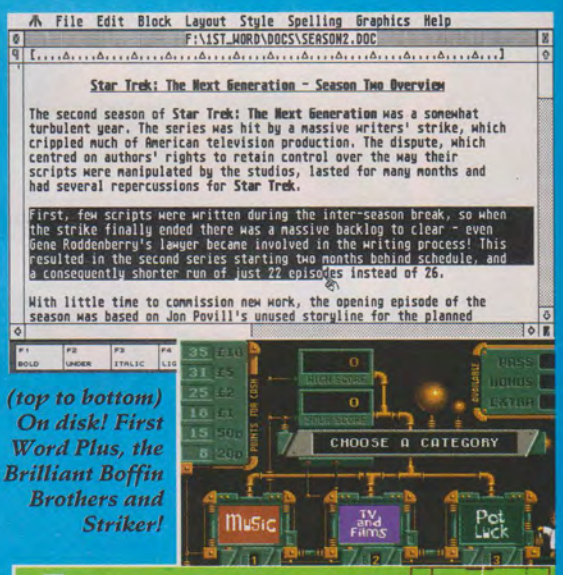
A fully featured, working demo version of this well-known sequencer ...

AND CRAMMED ON ALSO...

A host of useful utilities to make life with your ST even easier including...
XCONTROL – Atari's latest upgrade
STDCAT – Tidies up and catalogues disks,
MEGA DEPAK – Depacks 40 file types easily.
MACCEL 3 – Excellent mouse accelerator.
RATEHD – ICD's utility rates your Hard Drive
PINHEAD 2.1 – Loading accelerator.

AND FOR YOUR ENTERTAINMENT

POWAQQATSI – an excellent, original and fully featured chess game.
DRACHEN – solitaire Mah Jong
STRIKER – Playable demo
BOFFIN BROS – Playable demo
And a host of others – 22 programs in total!!



(top to bottom) On disk! First Word Plus, the Brilliant Boffin Brothers and Striker!

This month sees the return of high quality, football games with Striker and Sensible Soccer both turning in blistering performances and an ST Review Challenge Shield puts eight of the best football games up against each other. See how they do inside...

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44 BUILD YOUR OWN HARD DRIVE
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Isn't it time you upgraded from your Atari mouse to something a little better? We look at a magnificent seven...

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Are you ready to take part in Megasports?

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A complete, commercial word processing package, an exclusive game or two and much more! 22 programs in total, utterly stuffed onto the disks – fantastic value!

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Save yourself a monthly journey. Subscribe!

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Football games open the season this month plus lots more!

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NEWS

Welcome to Britain's biggest and brightest ST magazine for all Atari owners. You may be new to the world of the ST or maybe even a seasoned veteran, yet there's something here for everyone, all guaranteed to help you get the very best out of your favourite computer.

Top of the list for this month is the news that Atari are soon to be launching their latest (and greatest) machine for the future, the Falcon. A full report begins in the news section. We've seen the machine running and we're really excited about the potential.

Meanwhile, those of you who want to get to grips with their present machine, the cover disks contain a full, commercial WP program, First Word Plus and a time limited, usable version of the 16 track sequencer, First Track plus a veritable army of utilities and games with no less than 22 programs for your entertainment and use – 12 of which are exclusive to ST Review readers.

For football players everywhere, the season kicks off in this issue with a four page knockout special and exclusive reviews of Sensible Soccer, Striker and Graham Taylor's Soccer Challenge.

More interested in using your ST seriously? Then look at our hard drive round-up on page 34, or our Step-by-Step guide to building a hard drive yourself for a fraction of the cost.

There's also the first part of a mouse comparison (page 47), a look at monitors (page 52), MultiGem (page 56), time cartridges (page 58), the latest in Fax modems and much, much more. We're packed with comparative tests this month so that it won't cost you the earth to enter the amazing world of the ST.

GARTH SUMPTER
EDITOR

THE £399 THE FALCON TAKES TO THE SKIES!!!

Here they are, the pictures that everyone has been waiting for. These are the most up-to-date pictures available concerning Atari's next generation of computers accompanied with a full run-down of what the new package will mean in terms of pure computing power!

The Falcon as we know it at present. It's in an ST housing under a different colour. Nothing yet is decided about the casing of the machine, but the technical specification is all but complete. . .

The Falcon is still in the early stages of production, although there are already over 50 machines in this country with developers who are currently working on software that will be specific to the machine and make full use of its varied and superior functions. At the moment, although the ST press are all calling the machine the Falcon, it remains to be seen if it can keep that name as it is currently unregistered and is just a working title.

The single, biggest news on the Falcon must remain the fact that it looks to be very competitively priced with a spokesperson for Atari giving the price for the entry level machine, which is expected early in the New Year, as £399. This puts the Falcon in direct competition with Commodore's A600 which has to be bad news for Atari's competition, given that the Falcon's unquestionably higher specification will ensure that Amiga buyers will think twice before buying the A600.

Perhaps this will lead to a drop in price, but more importantly it demands an answer to the question of what Commodore will do to redress the balance.

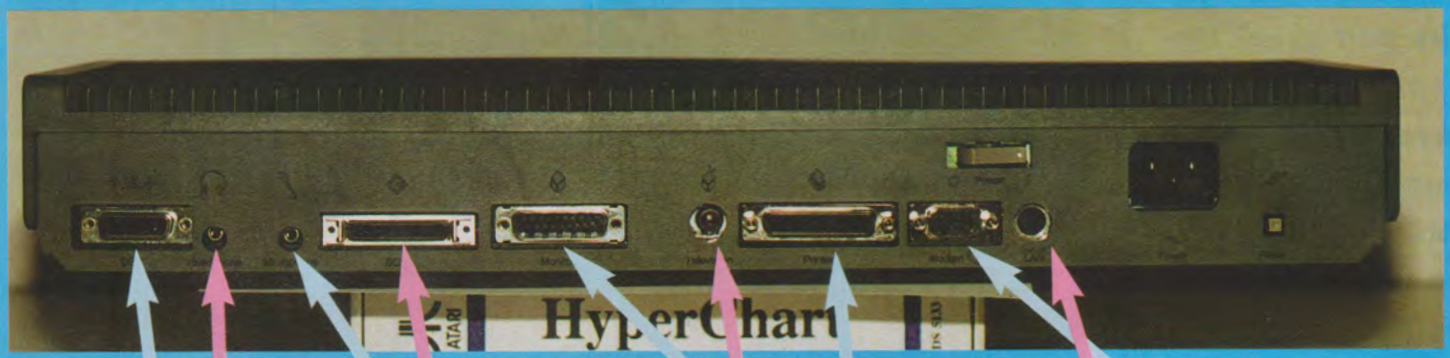
Regardless of the implications for Commodore, the effect of the new technology platform remains clear.

For music, the DMA chip will give four channel stereo which has so far convinced major music software companies to write their packages to new specifications. Steinberg is already working on a Falcon version of Cubase – with over 6,500 users in this country alone – and many European companies are just waiting to get their hands on the machine in order to develop serious software.

In terms of games software, Britain leads Europe, with development machines already sitting with some developers in this country – companies like Electronic Arts and Ocean , who are recognised by Atari as top software companies, are developing software that will be released with the Falcon's launch. The future for Atari has never looked so good.

DREAM MACHINE

THE FALCON – THE LOW-DOWN ON ATARI'S HIGH FLYER



26-PIN; DSP

The Digital Signal Processor is one of the most powerful additions to the Falcon's hardware and this socket is used for external connection. Consequently, another hardware device will be able to use the Falcons DSP.

3.5MM STEREO SOCKET; HEADPHONES

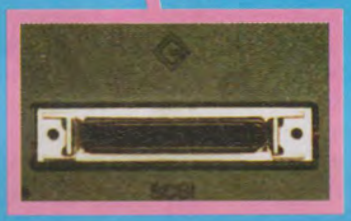
Apart from using the speakers built into a monitor, and also has a mono speaker built-in, a personal headphone socket has also been included; standard walkman/style headphones will connect directly into this socket. The output is 16-bit which means that games playing with headphones on will give hi-fi quality sound.

3.5MM STEREO SOCKET; MICROPHONE

The Falcon can use the stereo microphone socket to record audio and then convert it into a 16-bit digital format for use by programs running on the Falcon.

50-PIN D-TYPE; SCSI

SCSI is the Small Computer System Interface and allows for fast movement of data to and from the Falcon. Hard Drives will be connected here, and will no longer require the SCSI-DMA conversion board which all ST hard drives have required.

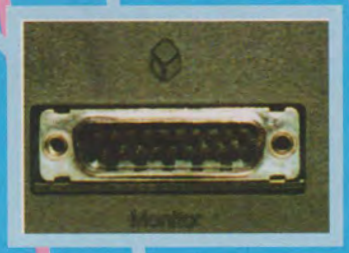


This means that you can buy a standard SCSI hard drive (these are much cheaper than their ST equivalents) and use it. Professional and hand scanning systems will also be able to use this port.

In fact, this is a true SCSI 2 port which means that it can handle double the data flow of a conventional SCSI port.

19-PIN D-TYPE; MONITOR

The monitor port conforms to Super VGA standard. However, the current ST range of monitors can be connected by using small adaptors so existing high resolution mono and medium resolution colour monitors can be used as well.

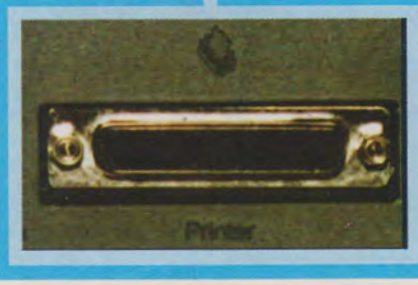


PHONO; TV MODULATOR

This is the same as the connector on any STM, STFM, STE and so on, and is used for direct connection to a television set.

25-PIN D-TYPE; PARALLEL/PRINTER PORT

This is the same as the current equivalent on the ST and will be used to connect the Falcon to



the standard Centronics port on any printer.

9-PIN D-TYPE; MODEM/SERIAL PORT

This will be used for connection to a modem or any other external device which requires a serial connection. Serial printers can also use this. This size of socket is usual on the PC; the ST serial port used a 25-pin version which was non-standard.

8-PIN MINI DIN; LOCAL AREA NETWORK (LAN)

A high speed LAN connection will let Falcon owners transfer files and data from their machine to any other supporting the same system. This will include any other Falcon, and possibly PCs and Macs as both support LAN protocols, although some conversion may be necessary.

FALCON APPLICATIONS

The power of the Falcon is beyond question, but what does this new technology actually mean to the end user? Vic Lennard takes us through the implications of the Falcon and the connotations of using a Digital Signal Processor...

The inclusion of the Digital Signal Processor (DSP) is one of the single, most exciting prospects for the Falcon. A Digital Signal Processor is a micro-processor dedicated to the task of manipulating digital signals. Most of us look at such signals as being the kind of audio data you get from a CD player, but there are other kinds of digital signal apart from digital audio.

Information which travels through a telephone line is usually in a digital format. In fact, most of the UK's telephone network has "gone digital" over the past few years which is why most of us use "tone" dialling telephones. The Falcon can generate dialing tones and connect you to the telephone network; it may even allow you to use a microphone and headphone headset to talk and listen to people.

On the data communications side, the Falcon will be able to act as a high-speed fax machine by receiving the necessary data, displaying it on-screen and letting you print to a printer or save as a file to disk.

In a similar way, it will act as a modem; no more purchasing of expensive external equipment to carry out such tasks.

Most of us have seen "image enhancement" taking place in science fiction films; a hazy picture appears on the screen and is "computer enhanced" so that it can be seen more clearly.

This is not just science fiction, as the technology has been used for various purposes from allowing us to see clear images of distant planets to trying to find out whether the Loch Ness monster exists! Such information is also in a digital form; the DSP will allow such techniques to happen on the Falcon.

BETTER PICTURES

Images shown on a computer screen are the result of a picture being "digitised". Line by line, the image is converted to data which can be manipulated in any way we choose. Anyone who has used a computer-aided design program on the ST will be aware of how slowly complex operations are performed and building 3-D images is even worse. Not with the Falcon; the DSP is custom-built for such tasks. In a similar light, Desktop Publishing will take vast steps forward.

On our cover disk for Issue 4, ***Dr Tiricc*** was included. This includes a speech synthesis program which is certainly raw around the edges because the ST does not have the necessary power to create better quality speech synthesis. Not so with the Falcon, which can handle far more real time information - thanks in no small part to the DSP - and which will not only be able to synthesise speech but also process it in various ways.

Using the microphone, it should be able to accept, recognise and process incoming human voice. Just imagine being able to speak to a computer and get it to carry out your commands!

SOUNDING GOOD

Where sound is concerned, the sky's the limit for the Falcon. The DMA sound chip can record and playback up to four stereo channels of CD-quality (and above) sound; imagine on-screen tape recorder pictures which show your voice appearing as you speak into the microphone! The DSP will add the ability to be able to process sound in real time. For instance, the right software will let you add reverberation, as though you were in a canyon, or pitch-shift your voice to make you sing in tune, or alter the tone of your voice, or.....

All of the above are possible, but depend on having good quality programs available for the Falcon. These have to be well thought out so that they have both the power to deliver results, and are user-friendly enough to allow you to use them!

While programmers have had development machines for a while, it will take time before we see the best of the Falcon. After all, it took years before ***Calamus***, arguably the best DTP program for the ST, appeared - but such is the improvement on the capabilities for MIDI that Steigberg are already working on a Falcon version of the world's premier music package ***Cubase***...

WHAT THEY'RE SAYING ABOUT THE FALCON...

To say that the Falcon has created quite a stir in the computer market would be an understatement

ELECTRONIC ARTS – Simon Jeffries
"In terms of the hardware, it's a very nice bit of kit."

COMPOSOFT - Neil O'Nions
"The Falcon represents the next generation of complete home computers. The high specification of technology employed by the machine coupled with a low price point, will ensure that a whole new generation of application software will quickly follow, bringing an amazingly high computing power into the hands of the consumer and mass market."

KELLY SUMNER
Managing Director Commodore UK

"Atari's hopes of success depend in the market depend upon a competitive price point being established for the new machine."

BOB GLEADOW
Managing Director, Atari UK
"The Falcon is the next generation of home computer and paves the way in introducing the highest specification available at the price."

As the pricing level for the Falcon will be set at £399 for the base level 1MB machine, it would seem certain that it will not only have a competitive price point and be successful, but also will hit Commodore's A600 sales too. So watch out boys...

The news is dominated by the Falcon this month, but here's a round-up of what else is going on...

HIGH FLIERS

Two new games are expected from Microprose by the new year. They are ***B17***, which is due out in November and ***ATAC***, which will arrive a couple of months later.

There's no news yet on ***ATAC***, but we can tell you that ***B17*** is a World War 2 bomber simulation that gives you full control of the classic WW2 airplane and its whole crew. The graphics are what we've come to expect from Microprose, and the game is highly detailed, with strict attention being paid to authenticity. Look out for more details soon.

MODEL CITIZENS

The European launch of a new range of 24-pin printers from Citizen will take place this month. The Swift 200, Swift 240 and Swift 240C colour printer are all well specified and offer minimal noise levels.

According to Julie Haswell, spokesperson for Citizen, the Swift 2 series offers all the benefits previously limited to non-impact technology – quiet printing, scalable fonts and quality output.

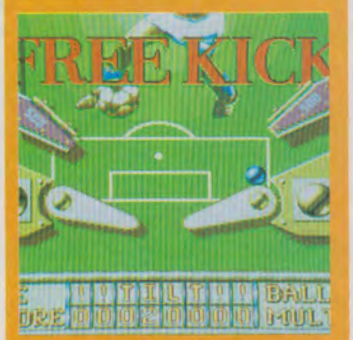
The new line-up of printers have a speed of up to 240 CPS and all have an 8K print buffer as standard, expandable to 32K (Swift 200) and 128k (Swift 240 and 240C).

The new Swift 2 series from Citizen

Citizen tells us that the prices have still to be finalised, but they will be in line with the existing Swift series that they are replacing. Expect the Swift 200 to weigh in at £269, the 240 at £349 and the 240C at £369 plus VAT. "These offer excellent value as they have many extra new features like three extra fonts and more for no more money," commented Citizen.

SOCCER WITH FLIPPERS

A new budget game from Codemasters will shoot into the shops this month. It's called *Soccer Pinball* and, as the name suggests, it incorporates both games. The game will retail at £7.99.



Flipping football!

HEAD START FOR ATARI

The latest incarnation of the bundled packages which include an STE, the ***STart*** pack is now outselling all other ST packs, according to Silica Systems.

Andy Leaning, spokesman for Silica, commented: "The combination of arcade games, word processing, animation and graphics packages at a price of just £259 has proved just right for first- time buyers".

Bundled software packages have proved popular in the market place because they allow buyers to get up and running straight away.

The pack not only has four games (***Missile Command***, ***Super Breakout***, ***Crystal Castle*** and ***Battlezone***), but also a word processor, graphics package, animation program and the Atari basic programming language.

CHEAP ACCOUNTS

Mercantility is a new accounts package from Unidex Software Developments. The package has a custom desktop which is said to improve on, and include features previously not incorporated in, GEM. Among these are an on-screen calculator, graphical memory checker and an attractive overall style.

Mercantility includes Purchase, Nominal and Sales Ledger, Cash Book, Assist register and various reports and is due out in early Autumn, priced at £29.99.

BETTER SERVICE – GUARANTEED

Fujitsu has announced an improvement in the warranty terms for its non-impact laser and inkjet printers.

Within the first 12 months after purchase, they are offering on-site maintenance for no extra cost. The reason lies in their confidence that their printers are among the most reliable available.

John Goodyear, spokesman for Fujitsu said: "The mean time between product failure, down time and the cost of maintenance are always part of the buying decision. So reliability must remain one of the most important factors influencing the printer buyer."

CHRISTMAS SHOPPING

The Christmas Computer Shopper Show '92 will take place at Olympia on the 19th to 22nd November. Although mainly for PC users, it's a good place to pick up disks and useful peripherals for your ST.

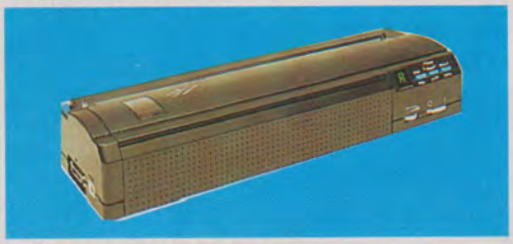
ON YOUR MARKS

Lexmark has announced two new printers – the IBM portable and the IBM 4070 IJ inkjet printers. The portable boasts a maximum resolution of 360 x 360 dpi with a list price of £325. It offers battery operation providing about 30 pages on a single charge, LED operator panel and multi format paper handling. It comes with a mains adapter and weighs two and a half pounds, and is less than 12 inches by four in size.

The new 4070 IJ from IBM.

The 4070 IJ has the same resolution and the package features an automatic sheet feeder that will handle up to 50 sheets.

It is compact and has a print speed of 110 cps in draft mode and 83 cps in letter quality. It is mains operated with an optional battery pack, has seven resident fonts and sells for £399.



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PICTURES FROM AN EXHIBITION

Wembley Exhibition Centre was the venue for the 6th International Computer Show. Vic Lennard was there with camera in hand...

Sales are usually low during the summer months and the 16 Bit Computer Show has generally provided exhibitors with the chance to move stock and the general public with the opportunity to find bargains. This year's show was no exception, now running under the title of the International Computer Show. Apparently in excess of 20,000 people passed through the doors and many of the exhibitors reported good sales (and profits!).

Atari (UK) were absent from the show, but their blue and white banner flew overhead as a constant reminder. One of the companies trading underneath was Gasteiner, offering the kind of deals that only they can...

Bargain buys and good deals were the order of the day. The crowds mulled around looking for that incentive to be drastic on the plastic...

Two different ways to improve the feel of an Atari keyboard; Mega Touch uses springs while TT Touch employs strange, silicone domes.

Having received an ST Review Budget Buy award in Issue 4, it came as little surprise to find out that Microdeal had sold out of copies of Concerto. Still, there was one copy left which just happened to be running on the ST when we took this photo...

ST Review has the first exclusive photograph of the board which will shortly be available from Composoft. The ROMs on their own will be £49.99 and £69.99 mounted on an easy-to-fit board.

BIG NAMES LINE UP FOR UK CES

Following our report last month that discussions were under way for a UK version of the American CES show, we can reveal that the show now looks set to take place in September next year, although a firm date has yet to be announced.

Backed by Rupert Murdoch's News International, LIVE '93 exhibition is to cover major electronic markets such as audio & hi-fi, photography, broadcast television, video, communications, computers and video games.

Atari is among some 40 "founder members" backing the show. Some of the other names you can expect to see include Amstrad, Commodore, Konami, JVC, Sony, Panasonic and Sharp.

LYNX AND BATMAN FIGHT IT OUT

The new ***Batman Returns*** Lynx pack is being aggressively promoted by Atari. A 60 second commercial will appear in cinemas up and down the country for at least eight weeks depending on the success of the film. In addition, there will be five million advertisements in cinema magazines and the same number of leaflets distributed in venues across the country.

Atari and Warner Brothers are organising competitions for children giving away machines, games and other ***Batman*** goodies. This includes the top children's show ***Parallel 9***.

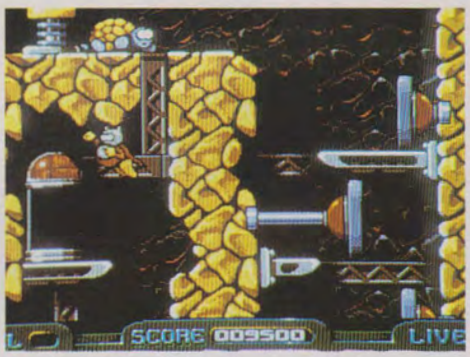
An Atari spokesman said: "We think it's a perfect match. The marketing is benefiting from the success of the film in the US. An enormous demand for the product is expected."

PENSIONERS STRIKE BACK

It's the return of the wrinklies in the new budget priced game from Codemasters called ***Captain Dynamo***.

The plot involves 75-year-old Ernest P. Dynamo as Captain Dynamo, who is trying to stop his fellow septagenarian, Austen Von Flyswatter from building a rocket which he wants to use to transport himself to the moon, to escape from the lovely Lady Phylis Uppenhoofen whose diamonds he has stolen.

Due out later this summer, the game will sell for £7.99.



Our hero leaves his zimmer frame behind and heads for the teleport.

The geriatric super hero in action.

FIRST IMPRESSIONS

Once again, ST Review has its finger on the pulse of the latest game happenings. So if you want to know what's going to be hot on the ST, look no further. . .

SHADOW WORLD

ARCADE ADVENTURE

Krisalis

For the many fans of Domark's stunning ***Shadowlands***, a further bout of exploration is on the way – but not from the Putney-based software house this time. During the development of ***Shadowlands***, the programming team, Teque London, was already keen to forward work on a sequel, but Domark was reluctant to take such an unknown quantity,

leaving Krisalis to eagerly step in.

Using the same isometric system as the Domark game, ***Shadow World*** places four hardy adventurers in the middle of an alien-infested space station. If this sounds a little familiar, then it could be because James Cameron's ***ALIENS*** was influential in the scenario. However, before the game is dismissed as "***Shadowlands*** In Space", ***Shadow World*** is going to be a far more compact and neater game. Krisalis says that, although the game will be every bit as large as the original, the puzzles and aliens won't be so far apart, so a tense atmosphere is guaranteed.

The graphics will contribute to this atmosphere. The space station is made up of a series of claustrophobic tunnels, corridors and conduits, withinwhich the Extra Terrestrials make their appearance. To combat their unwanted attentions, your squad of Intergalactic Marines are armed with a wealth of futuristic weapons – another area of the game that has been tightened up. In ***Shadowlands***, the player's weapons and inventory were accessed via a pair of screens. In World, though, this has been minimised to one, making object selection considerably faster and more convenient.

Both Teque and Krisalis are extremely happy with ***Shadow World***. A lot of the original game's source code has been used, with a September release date being mooted so, if Teque can keep up the atmosphere that the scenario offers, Krisalis should be onto a sure-fire winner.

MOTORHEAD

Virgin

ARCADES A

In my time I have played games based on ***Terminator II***, ***Robocop II***, even ***The Archers*** and ***Blockbusters***. I thought licences had got about as weird as they could when someone released ***Bull's Eye*** as a computer game. Now, however, Virgin is about to get the ST-owning community putting their thumbs through their belt loops and swaying their shoulders to ***Motorhead – The Computer Game***.

Bearing in mind the band's "rough 'n' ready" reputation, it will come as no surprise then that the game is a ***Double Dragon***esque beat-'em-up, with Motorhead's lead singer, Lemmy, duffing up all manner of rap stars, ravers, and country and western stars in a series of theme-related stages. Each of the screens scrolls horizontally, with the musical muggers appearing to do Lemmy over. Luckily, he's not unarmed and can either lash out at his assailants with his hands or feet or with his guitar. The reason for all this fighting is that Lemmy's band members have all been kidnapped and stashed away at the end of the level, and Lemmy needs them for a gig.

Once the chained member has been rescued, the game switches to a short driving section where Lemmy procures a vehicle and attempts to collect as many bonuses as possible. Following this, it's time for a quick sub-game, from which you can opt to "Grab A Groupie" (I kid you not!) by steering them to your car, or sink gallons of pints of Lemmy Lager in a scene reminiscent of the ancient Sega coin-op, ***Tapper***.

Motorhead currently exists as a handful of levels and sub-games. However, there are plenty of nice touches already – for instance, Lemmy's energy is shown as a series of bullets in his bullet belt. A release date is set for within the next two months, so expect a review very soon.

LETHAL WEAPON III

OCEAN

A bit of an early peek this, but for those of you who enjoy the exploits of Riggs and Murtaugh (and who doesn't?) a game based on their explosive pairing is currently under development at Ocean's HQ. From the little we have seen, the game is a cutesy platform romp along the lines of Ocean's previous hit, ***Hudson Hawk***, with you playing as either Riggs (Mel Gibson) or Danny Glover's excellently portrayed character, Murtaugh.

Each of the two characters has their own uniquely special talents, each of which will prove particularly useful in certain instances during play, particularly as control over each character can be swapped at any time.

At the time of writing the game isn't expected to be ready for release until Christmas (presumably to coincide with Lethal III's video release and the related hype in the video rental shops), but as we're dealing with a good licence – expect more news soon.

LIVERPOOL

GRANDSLAM

Grandslam is set to unleash its long-overdue ***Liverpool*** game on to the many fans of the Scouse team. ***Liverpool*** uses a neat forced perspective view to depict the action, and the players are shown running up and down the pitch, which scrolls smoothly with them. All your top Kop heroes are there – Dean Saunders, John Barnes and Ian Rush – and they can be selected via a series of digitised pictures before the action starts.

Arc Developments is the team behind ***Liverpool*** and, to their credit, they have produced what must be one of the best-looking footy games yet. Its sprites are larger than those of Rage's ***Striker*** and are also more detailed, but how it plays remains to be seen. In addition to the nice graphics, though, Arc is attempting to add as many realistic touches as possible, including differing weather conditions which, obviously, affect the way the ball travels. Development is being led on the Amiga, but the ST version is said to be almost identical, apart from a slightly smaller screen.

NEW *** DIVISION ONE 92 REVISION ONE *** NEW

DIVISION ONE 92 REV 1

"(The Midnight Oil) treat soccer in the sophisticated way Americans treat their national games." -The Guardian

THE GAME Everyone has their own ideas on what makes a soccer team "tick". Here is the opportunity to put into practice your own ideas. Operating from the English 1st division you must build a squad to challenge for the league title, the FA and League Cups and the 3 European trophies. And as players age, rebuild the team while holding off relegation.

SQUADS/TRANSFER MARKET In a 3 squad system (1st team squad, reserve squad and youth squad), use the continuous intake of youth players and training program to create a squad whose skills reflect your ideas. Supplement these skills with carefully selected transfer market acquisitions. As they age, veterans fade and youngsters develop, keep an eye on the changing skills of your team

SKILLS All players have a balance of 5 skills (no "skill levels") which you must develop by experimenting with your team. Even more important will be your judgement about the effect of the particular team balance or skill combination on the outcome of the match, and subsequently a season of football. Suitable training can develop/enhance skills.

MATCH/STATS Your judgement will be put to the test in this unique 4 minute match/stats simulation against accurately simulated opposition. This is the measure of your team and your most reliable source of information. There are displays of: match flow, two teams, player-with-the-ball, injuries, discipline, substitutions, in-match tactics, goal scorers, possession breakdown and performance assessment.

REVISION ONE
The best just got better! All updates that have been made to Division One 92 over the last six months. In addition the match screen has improved, opposition team info expanded, a European transfer market added and a few more minor changes. An edit program and a customisation program have also been added. The manual has been expanded and the packaging improved.

EDIT PROGRAM. Edit the team and players that make up Division One. Produce **your own** Division One, or Scottish League, British League, European League, German/Spanish/French/Italian...etc...etc. Or even make up a league of all the best teams you've ever seen.

CUSTOMISATION PROGRAM Customise the 45 man starting squad. Use your own favourite players, or your local side. How about as squad with Pele, Beckenbauer, Best, Cruyff, Maradonna ....?

WHAT IS DIFFERENT ABOUT THIS GAME?

Division One 92 transforms the soccer management game. You can concentrate on the football. Experiment with players, formations, team styles. Build your dream squad and check it out in accurately simulated league/cup football. Match results are from a unique soccer match. Every pass, tackle, shot etc. is determined by the players involved. Your choice of skills thus influences match results. Mental arithmetic has been dumped. Football knowledge is the name of the game.

HEAD COACH V3

"When it comes to the 4th down Headcoach has it"."Headcoach", "TV Sports Football" head to head. (Pop Comp.)

Headcoach V3 has been described as "the best game ever put onto a computer". It is the complete American Football game, a multi season epic with the very best strategic elements of the real thing. You will call the plays, devise the gameplans and develop the team.

Use the first season (2 pre-season games, 16 regular season games, and the play-offs) to discover your 45 man squad of players. Then exploit the college draft to improve the team and expand your game play to beat the very best the NFL can throw at you.

Players will age and teams will fade (a player will last about 6 seasons), but you will stay and rebuild ....

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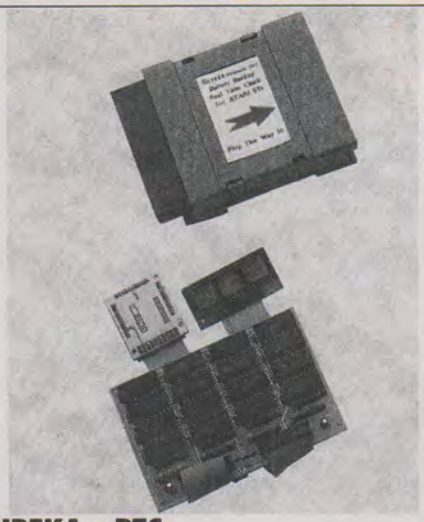

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NOBBY THE AARDVARK

Thalamus

From the brains behind Codemasters' ***CJ Elephant Antics*** comes a game based on that most unusual-looking creature, the aardvark. If you have ever seen the ***All New Pink Panther Show***, you will know that Inspector Clouseau was replaced by a blue aardvark – and Thalamus's Nobby is a dead ringer for this character.

Played over a series of eight-way-scrolling levels, the basic aim in ***Nobby*** is to eat as many ants as possible whilst avoiding harm at the hands of the many creatures who swarm about. It's not all bad, though, and Nobby can protect himself by spitting the said ants at the oncoming creatures – in addition, a series of transport options also make Nobby's life easier as they can be used to reach previously inaccessible areas. ***Nobby The Aardvark*** is being developed on the Amiga, with an ST version trailing slightly behind it.

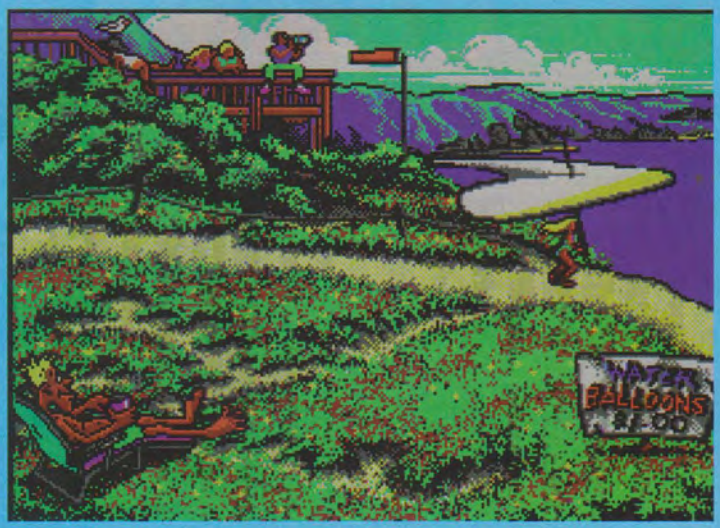
Nobby seems to owe more than a little of his cartoon-like appearance to the All New Pink Panther Show...

CALIFORNIA GAMES II

US GOLD

Converted from the PC original by Creative Materials (the team behind ***Final Fight*** and the forthcoming ***Street Fighter II*** conversion), ***California Games II*** promises to offer ever more "gnarly" sports and events. With the Epyx games exhausting virtually every sport under the sun, they have once again turned to the sunny climes of California for their inspiration.

California Games II features such macho events as hang-gliding, jetskiing, and skateboarding, and, as ever, your aim is to outdo the rest of your opponents by scoring maximum points for performance and style. The conversion has been under way for four months and is using graphics ported directly from the PC version. In the style of past Epyx games, rather than requiring frantic wrenching of the joystick to attain top marks, genuine skill is needed if you are to become top dog.

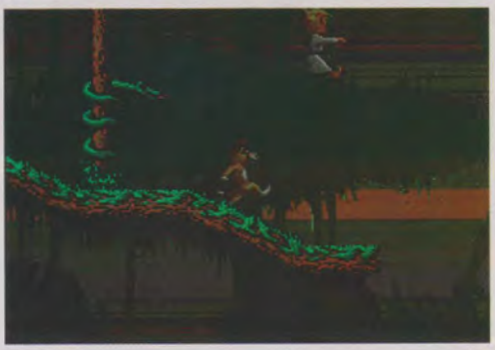


SLEEPWALKER

OCEAN

Coming soon from Ocean is a rather spiffy platformer starring man's best friend. ***Sleepwalker*** follows the somnambulist exploits of the eponymous Sleepwalker who – rather inconveniently, considering his affliction – lives in the middle of a zoo, a factory, and other potentially deadly areas. However, all is not lost, as this is where the walker's trusty canine companion comes into play.

Controlling this hound, the player must guide his human master away from danger by either bridging gaps or moving key obstacles or nasties from his path – although this normally results in the dog taking the pounding! Graphically, ***Sleepwalker*** is a stunning game. The sprites are colourful, and the nasties and obstacles tie in with their themes perfectly .



The dog is controlled via the joystick, and can run, jump, and throw himself into dangerous situations with ease – and to turn his master round or help him reach higher platforms, a well-placed kick up the backside will send him flying without disturbing him. This adds a slightly ***Lemmings***-like feel, but ***Sleepwalker***'s levels are far more convoluted than anything that DMA's little critters faced.

FOOTBALL KID

KRISALIS

Just when you thought that every football-related avenue had been explored, up pops Krisalis with another extension of the popular genre. However, rather than opting for another management sim or end-to-end match genre, they and developers Teque are set to cross the footy genre with the weird and heady world of platform games. Can such a strange marraige of styles work? If the demo we've recently been privileged to see is anything to go by, then the answer is yes.

Football Kid stars a little tousle-haired lad who is visting the sites used for the 1994 World Cup championships. As he explores Spain, England, and the host nation, America, he can also take the opportunity to collect a few bonus points along the way by skillfully dribbling his ball past all manner of level-related nasties and by collecting a few valuable gems. At the time of writing, ***Football Kid*** doesn't actually feature any moving nasties, but apparently the oddball characters will include Cowboys and Indians in the US of A and those Football Hooligans in Britain, all of whom must then be avoided or stunned with your ball.

As the game progresses, the levels get trickier to plough through and layouts of the many platforms get further apart. In addition, further gameplay ideas - such as moving chains - are steadily introduced to keep things (literally) swinging. From what we have seen, ***Football Kid*** seems well placed to pull off its daring mixing of styles. Even without the nasties, it remains extremely playable and addictive and will definitely be one to watch out for.

SAS COMMAND

KRISALIS

Such is the military precision behind each SAS mission that Krisalis is set to release a strategy-cum-arcade game based on their skills. Controlling a party of crack troopers, the player must guide them across a series of multi-directionally-scrolling play areas on a series of important missions. They must be armed and assigned key tasks, then sent to blow up installations or assassinate terrorists.

However, whilst planning the mission properly is of key importence, genuine skill is need to pull it off in the arcade scenes - for instance, stealth is essential when scouring the perimetre of a heavily-guarded base, and a loud explosion is the last you need to bring attention to yourselves. Details are scarce at present, and expect a name change, too – probably to ***Favour Team***.

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COVER DISKS

GETTING STARTED WITH FIRST WORD PLUS

In this first instalment of a three-part series to complement First Word Plus, on the cover disk, André Willey guides you through your first word processed document

Having purchased a brand new computer, one of the first tasks anyone turns to (apart from the ubiquitous game or two!) is word processing.

While not everyone will immediately need to store database information, or calculate their accounts, we all write. Letters, notes, phone lists, recipes, newsletters... the list is endless, and all of these are tasks that can be handled by even the most elementary word processor.

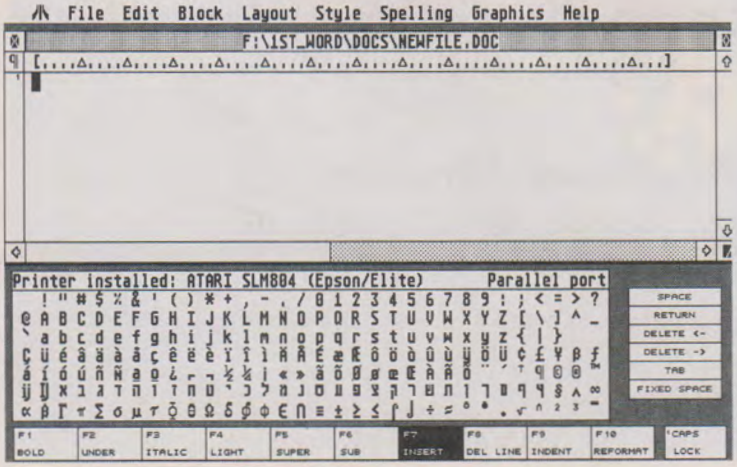
When the Atari ST was first released it was bundled with a very basic word processor called ***First Word***. This was actually little more than a souped-up text editor, but a fuller version was soon to be available, imaginatively entitled ***First Word Plus***. Partly due to the number of people upgrading from the free bundled version, and partly due to its simplicity of operation, ***First Word Plus*** has now established itself as the standard beginners' word processor on the ST.

At its simplest, a word processor enables to you type text on your computer keyboard, then manipulate it on the screen until you are happy with it, before finally printing it out on paper. You can keep a copy of your finished work on disk too, enabling you to recall it at any time and print another copy, or modify it to create a new document.

COLOURFUL LANGUAGE

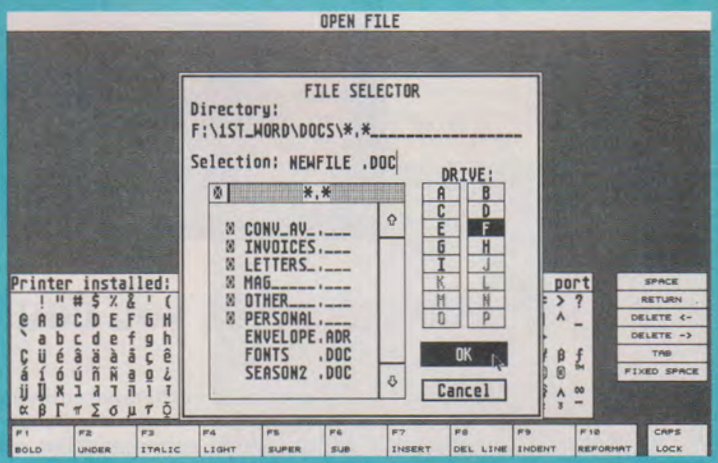
First Word Plus accomplishes all of those goals, and many more besides. Entering text is simplicity itself. First load up the program, and when it asks you for a filename enter a suitably descriptive name. Don't be tempted to call everything LETTER_1, LETTER_2, and so on – you'll never remember what they were all for!

Once you've chosen the name, simply start typing. Don't worry about pressing the Return key at the end of each line as you would on a typewriter, the computer takes care of all that for you. The only occasion where you

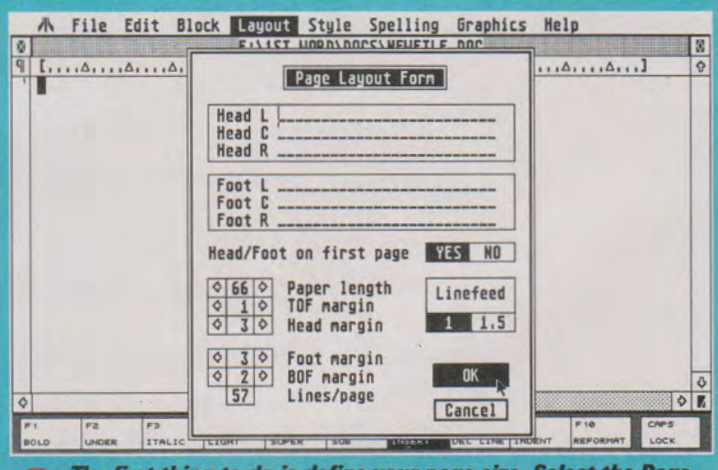


The main First Word Plus screen, showing the main typing area at the top, with the function key controls at the bottom. Click with the mouse on the middle section to create special characters which are not normally available on the ST keyboard.

STEP BY STEP



1 ***After First Word Plus has loaded you will see a file selector box. Assuming you haven't created any documents so far, just type in a new filename and click on OK. A window will open, ready for you to start typing.***



2 ***The first thing to do is define your page size. Select the Page Layout entry from the Layout menu, and adjust the paper length and top and bottom margins. The values shown here are suitable for most tractor feed paper.***

will need to press Return is to tell the computer when you have reached the end of a paragraph, and that it must start the subsequent text on a new line.

You can adjust the margin settings via the Ruler line at the top of the screen. The "[" and "]" symbols indicate the left and right margins, and if you click on either of these and drag it across the line, that margin will be altered. This won't affect your text until you start typing again – unless you press the F10 key, which will re-format the current paragraph (from the cursor onwards) to the new settings.

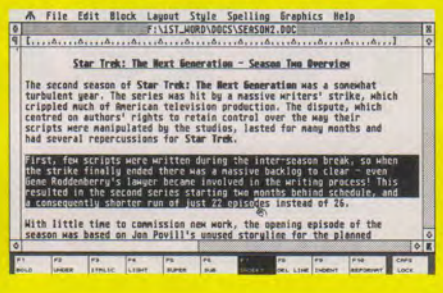
The triangles on the Ruler line are used to mark Tab stops. They can be set or removed with the mouse just by clicking at the appropriate point. While typing, you can press the Tab key to move the cursor on to the next available

CUTTING AND PASTING

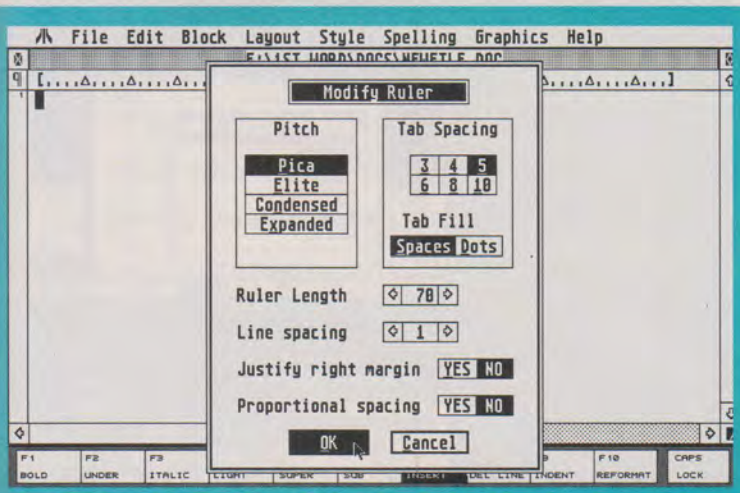
Probably the most important advantage of using a word processor over a typewriter is the ability to move text freely around the page before you finally commit it to paper

This is achieved by "cutting" blocks of text out of your document, and then "pasting" them back in somewhere else. There are a variety of block manipulation controls available in ***First Word Plus***. Once you have selected your block, pull down the Block menu: the Copy and Move commands are pretty self-explanatory, simply transferring the block you have created (or a copy of it) to a new position. If you don't yet know quite where the block should be placed, you can Cut it from the page. This places it into a temporary storage area inside the computer, from where you can Paste it back into the document at any stage – even making several copies, if you wish.

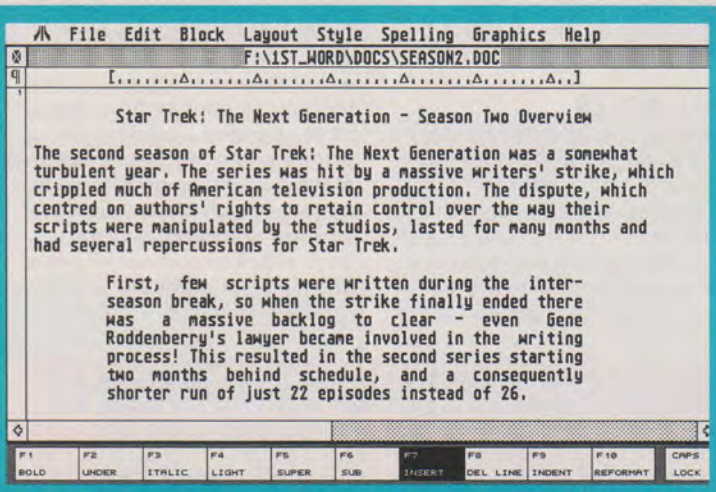
All of these functions have keyboard shortcuts to speed things up. To mark the start of a block you could use the Alternate+S key combination, and then reposition the cursor at the end of the required text and press Alternate+E. Finally, move the cursor to the new location for the block of text and press Alternate+M to move it.



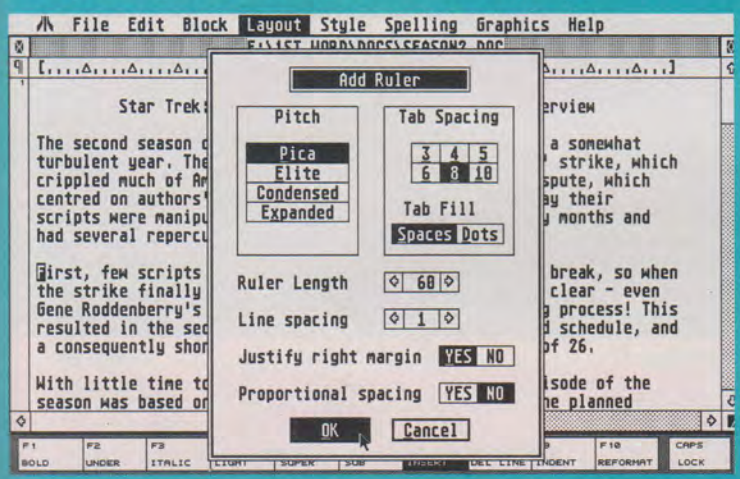
To create a block, position the mouse pointer over the first character you wish to select and press the left mouse button. Hold the button down as you move the pointer to the end of the block, then release it. The selected block will be shown in reversed text.



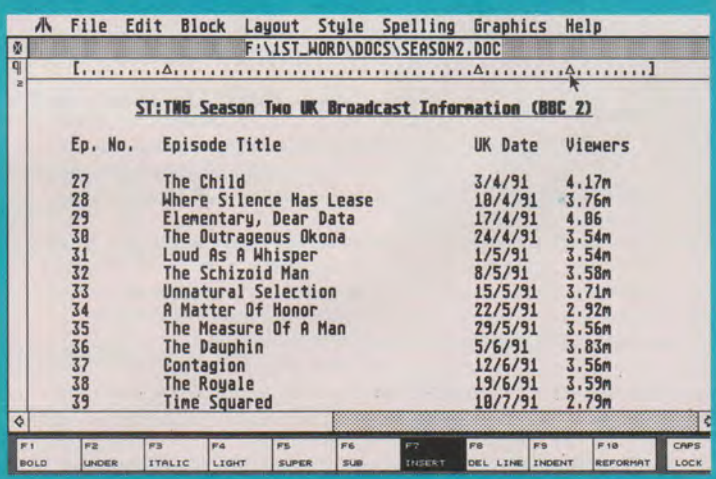
3 ***Now you can decide which style of text you will require, and set your standard Tab positions and margins. To edit this "Ruler", click on the small paragraph symbol () at the top left of the text window. Pica is the normal pitch used for typewritten work (10 characters per inch), with Elite being a little narrower (12 cpi).***



5 ***To alter the left margin, simply click on the [symbol (in the ruler line at the top of the window) and drag it to a new position. Press the F10 key to re-format an existing paragraph to match your new settings.***



4 ***You can now enter your text. Whenever you wish to change to new ruler settings, select the Add Ruler option from the Layout menu. This will open another ruler dialogue, which will be used to control the text from the current cursor line onwards. We 've chosen a new ruler to "justify" the text to the right margin.***



6 ***The ruler line is also used to adjust the Tab stops. The triangles indicate Tab columns; click on the ruler line to insert or remove a tab stop. To move your text along to the next tab position, simply press the Tab key once.***

tab position. If you want to indent the whole of a paragraph (perhaps to indicate a sub-section in a list), press the F9 key instead. When you continue typing, the left hand edge of the text will temporarily be indented to that tab position.

After you've been typing for a while you'll see a thin line and a number appear in the left hand margin. This is a page marker, automatically inserted whenever there are too many lines to fit on the current page. If you want to force the printer to start a new page – perhaps at the beginning of a new section or chapter – use the mouse to click at the required position in the margin.

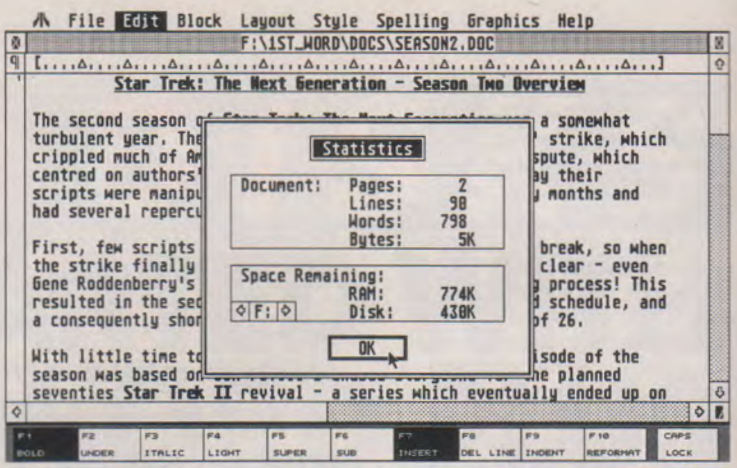
If you want to highlight a part of your document there are a variety of options available to you. The row of buttons at the bottom of the screen represent the 10 Function Keys on your ST keyboard. You can either press the key or use the mouse to enable each mode.

BOLD MOVES

For example, if you'd like to type some text in Bold, to highlight some important point, press the F1 key. The F1/Bold button will light up to remind you of the change, and as you continue typing you will notice that the text is now blacker than before. Similarly, to turn the bold effect off again, just press F1 again. All of the effects can be combined as required.

When you've finished your document, don't forget to save it to disk in case you need it again. There are two methods of saving available from the File menu. The first, Save and Close, will save the file and remove it from the screen. This is normally used at the end of a session, or when you want to move on to work with a new document. The second, Save and Resume, allows you to save your work periodically and then continue typing. This is highly recommended, just in case your computer suddenly crashes – or, heaven forbid, your nearest and dearest decides to unplug the computer in order to plug in a hairdryer or power drill!

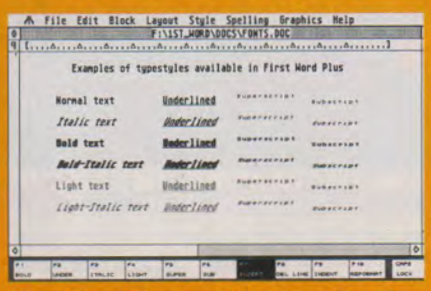
The final vital task is to print your new document out on paper for everyone to see. Select the Print Current option from the File menu and a dialogue will appear, allowing you to choose how many of your pages you wish to print - and even to change the margin settings on alternate pages, which is very useful if you are planning to print on both sides of a sheet of paper and need to allow for some binding space.



The statistics display can be either encouraging if you have typed enough words to meet your editor's demands, or depressing when you realise that you've still got a long way to go and no time left!

EMPHASISING THE POINT

There are a range of ways of making your text stand out



First Word Plus provides a variety of standard type styles, including Italics, Bold text, Light text and Underlining.

Although ***First Word Plus*** doesn't offer the wide choice of typefaces and sizes available in a DTP program – or even in some advanced word processors – it allows you to change the appearance of your text in a variety of ways. The pitch of the type can be adjusted using the Ruler system, from 17 characters to six characters per inch.

You can also alter the look of the current text by changing the typestyle. Most text will be written in the default style, often known as "Roman", but when you want to create impact in your writing you may wish to use Bold or Italic text, or underline headlines and important words - or even a combination of all three. These options are controlled from the Style menu, or by using the first three function keys – F1 for Bold, F2 for Underline and F3 for Italic.

There are several other options – F5 and F6 control Superscript and Subscript respectively. These modes generate a reduced-size script, above or below the main text line, used for adding notes or within mathematical equations. You can even select Light text using the F4 key, but not all printers are capable of printing in this mode.

CHEKKING YOR SPEELING

First Word Plus has two methods to help correct your spelling mistakes – both of which require you to initially load the spelling dictionary, via the Spelling menu. First, you may want to type out the whole document, and then ask the computer to check through all of the spellings for you. Move the cursor to the start of the document and press the Esc key. ***First Word Plus*** will now scan through the entire text, and each time it finds a word which is not in its dictionary it will pause and allow you to change it, or continue browsing by pressing the Esc key again.

The second method is even more useful. If you select the Continuous Check mode from the Spelling menu, ***First Word Plus*** will monitor your spelling as you type. If you enter a word which it doesn't recognise, it will immediately bleep to warn you. You can then choose to either ignore the error (maybe it's a proper name, which would not be in the 40,000 word dictionary anyway), or enter the browser where the incorrect word will be displayed along with a choice of possible corrections. If ***First Word Plus*** has correctly guessed what you meant to type, simply click on the right word and then carry on typing.

The computerised spelling dictionary can be used at any time to look up words, just like a real dictionary.

When the spelling checker discovers a word it does not recognise it can present you with a list of likely alternatives. Select the correct word and click on the Replace button in order to insert it back into the text.

You can even build up your own personal dictionary of regularly used words – your name, address, friends' names, common technical terms, and so on.

Next month we'll look a little further into printing your documents, including setting up a new printer driver to get the best from your printer. We'll also teach you how to add graphics to your pages.

UPGRADE TO FIRST WORD PLUS VERSION 3 FOR ONLY £29.95!

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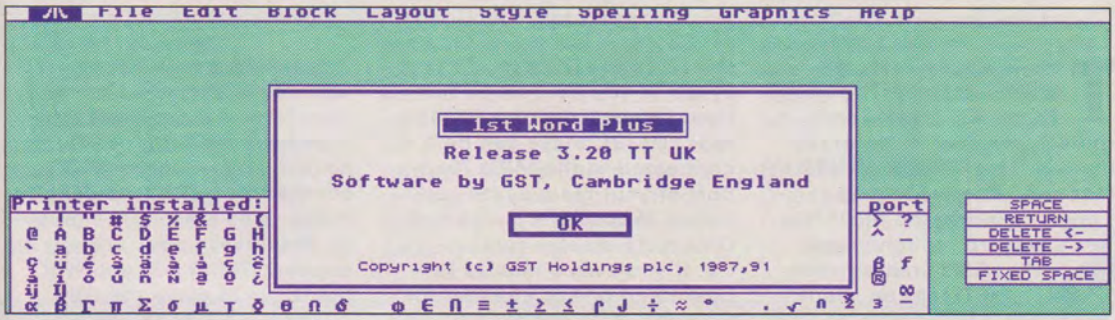
You've got version 2.0 of FIRST WORD PLUS free this month but here's your chance to upgrade your copy to the very latest version

The package would normally cost you £79.95 — but for only £29.95, you can now upgrade your copy of ***First Word Plus*** V2 to the very latest and much improved, version 3.



The upgraded version of First Word Plus has many enhanced features and the mail merge program, 1st Mail.

THE NEW FEATURES OF VERSION 3.0 ARE:

- a full mail merge system (1st Mail)
- printer drivers for HP LaserJet, HP DeskJet and Canon Bubblejet.
- full support for Atari TT
- keyboard shortcuts for most menu entries
- a range of user-definable defaults
- 1.5 line spacing and "proportional space" ruler options
- "upper case" and "lower case" block restyling
- improved Cut Out, Copy and Paste functions
- the dragging of icons to any position on the desktop
- two clipboards – one in memory and one on disk
- automatic overflow onto disk for large document editing
- first page header and footer on/off option

FOR YOUR £29.95 YOU WILL RECEIVE:

A complete First Word Plus V3 and 1st Mail manual
The latest version of First Word Plus and 1st Mail

To upgrade to version 3, just fill in the form below (no photocopies allowed) with a cheque or postal order to the value of £32.90 (including £2.95 p+p) to: Softline, Upgrade Offer, GST Software PLC, Meadow Lane, St Ives, Cambs PE17 4LG.

Name .....
Address.....
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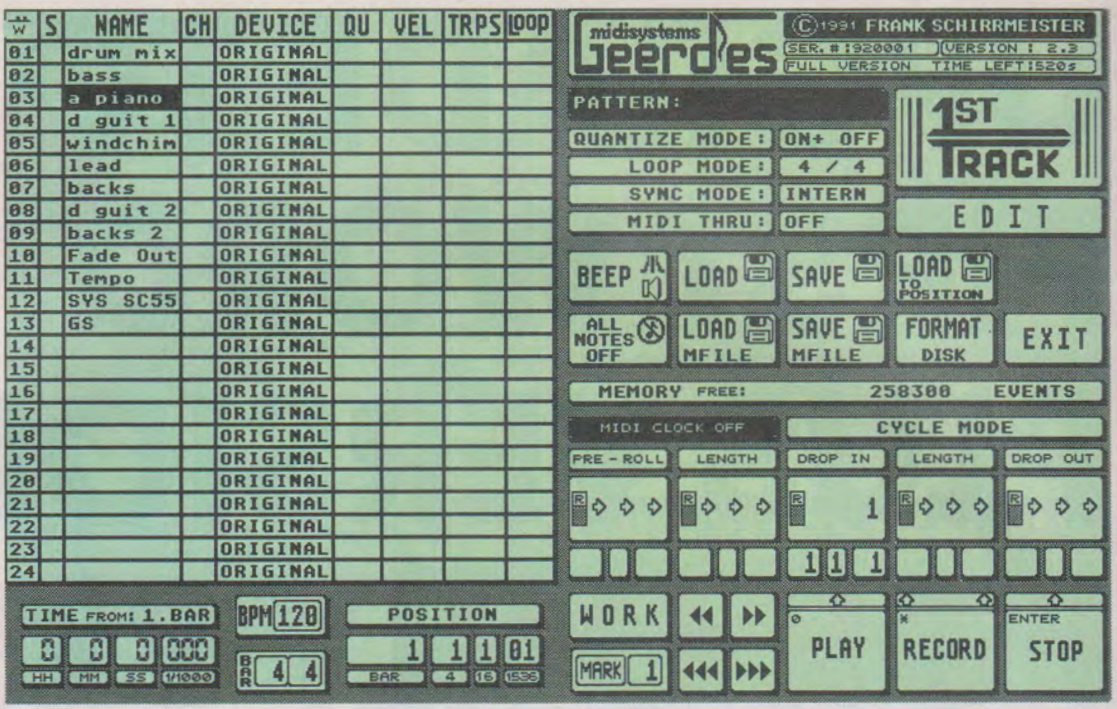
.....
.....
.....

Daytime telephone number
.....
Visa/Access number
.....
Expiry date
.....

All cheques/POs to be made payable to GST Software PLC
Although items may be dispatched sooner, please allow 28 days for delivery.

So you've got some MIDI equipment and you need a sequencer. . . try our brilliant 1st Track working demo



The main window displaying the track list, the control panel and main functions.

1ST TRACK

1ST TRACK ● NEWTRONIC ● 0.5 MB ● MUSIC DEMO

This is a fully-featured MIDI sequencer featuring 24 tracks, 1536 ppqn (pulses per quarter note) resolution, an event editor and a fast and effective tool box. It also supports the MIDI File standard, which means that files created with ***1st Track*** can easily be exported to other sequencers and vice-versa. The cover disk contains such files, allowing you to instantly hear what 1st Track is capable of, although MIDI File Save is disabled. To use ***1st Track*** you will need a MIDI synth of some description, preferably a multi-timbral unit like the Korg M1 or Roland D10.

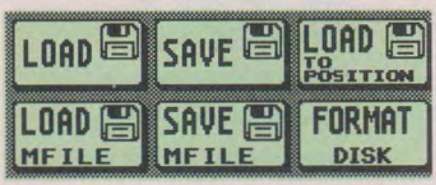
MIDI CONNECTIONS

Before making any MIDI connections, it is best to switch your computer off. There are generally two possible set-ups:

1. If you have an integrated synth keyboard (Korg M1, Roland D10), simply connect the MIDI Out of the synth to the MIDI In of your ST, then connect the MIDI Out of the ST to the MIDI In of the synth. If you have any additional sound modules (D110, M3r, TG33), these can be connected to the MIDI Thru port of your main synth keyboard. If possible, turn Local Off on the master synth.

2. If you own a master keyboard and one or more sound modules, connect the MIDI Out of the master keyboard to the MIDI In of the ST, then connect the MIDI Out of the ST to the MIDI In of the synth module. More modules can then be connected via the MIDI Thru ports.

Now switch everything on and load ***1st Track*** by double-clicking on its icon on the desktop. Turn the MIDI Thru on the right side of the main screen ON.



Loading, saving and formatting a disk are all available at the touch of a button.

PLAYING THE DEMO SONGS

Included with ***1st Track*** are several demo songs. These were saved as Standard MIDI Files and can be loaded by clicking on the Load MFile box on the right side of the main page. This will display the file selector where you can select one of the files for loading. You will be presented with a box asking whether this will be a new file or whether it should be merged: click New and ***1st Track*** will then load the song. If you have a GS or General MIDI compatible synth, the song is ready to be played. If, however, your synth does not support GM or GS, you will first have to mute the GS track by clicking to the left of the track name. You will then

MIDI EVENTS

When you are using the event editor, you'll normally see two events for each note you have recorded. The first of the pair is the Note On event which, as its name suggests, is the start time of the note.

Each note is then stopped with a Note Off event and the time interval between the pair is the length of that note. There are obviously many other MIDI events that occur, of which the most common are Control #1 (modulation wheel) and pitchbend events.

need to manually select the required sound for each MIDI channel. To start ***1st Track*** you simply need to click on the play button or hit "0" on the numeric keypad.

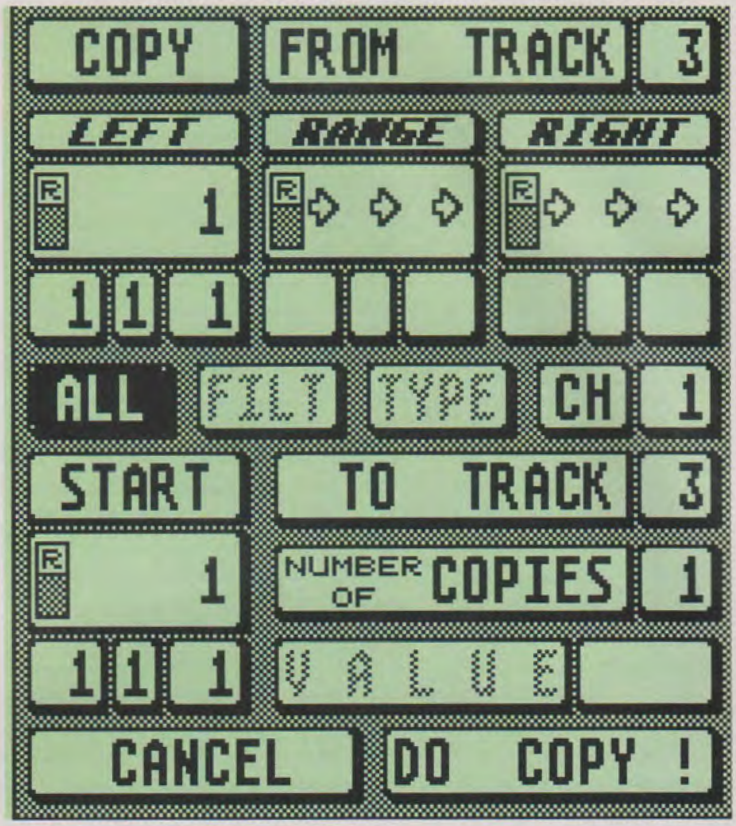
YOUR 1ST RECORDING

Before you start you may want to set the tempo or speed of the song. At the bottom left side of the main page you will find the BPM box; simply click on the value there with the left mouse button to increase or the right button to decrease the value. Most modern songs are between 100 and 130 BPM (beats per minute). Next, the locators must be set. The locators are found at the bottom left of the screen and are used to determine the length of the recording as well as its start and end points. To quickly set a 4 bar section, first set the drop-in locator to 1, then set the drop-out locator to 5. The package will let you set a count-in, or pre-roll, and you can specify how long you need it to be. A 2-bar pre-roll is recommended and can be set by clicking on the appropriate box. Note that the length box to the left of the drop-in box shows the length of the pre-roll, while the length box on the right shows the length of the section to be recorded.

Now select track 1 by clicking on its name field with the left mouse button; this should turn the field black. Next select the required MIDI channel by clicking on the channel field. Last, click on the Beep button as this will serve as a metronome, beeping on every beat. ***1st Track*** is now ready to record!

Start recording by clicking on the record button; the button should start flashing indicating that ***1st Track*** is now in record-standby mode. To actually start recording click on the Play button. ***1st Track*** will start the pre-roll giving you eight beeps to get ready. You will also see the position indicators on the bottom left counting away. As soon as they hit the drop-in point, the whole screen will invert its colours and ***1st Track*** will enter record mode. You can now play the keyboard and ***1st Track*** will record every note that you play as well as the likes of pitch bend and modulation wheel movements.

Now you can listen back to the results. Hit the Play button and ***1st Track*** will playback the recording. If you are not happy, you can re-record the section. If you are only happy with the first two bars, you can set the drop-in locator to bar 3 and start recording again. ***1st Track*** will play the first two bars as a pre-roll and then drop into record exactly at the beginning of bar 3. You may also want to quantise the recording to correct timing inaccuracies. ***1st Track*** will not only allow you to try different quantise values, but also to un-quantise. To select a quantise value, click in the QU field of track 1, scroll through the various quantise rates and listen to the effect that they have on the music. Typical values are 8, 12 and 16. If no value seems to have the right effect, simply switch quantise off altogether by scrolling back until no value is shown. To name the track, double click in the name field; a cursor will be shown and you can then type in a name of up to eight characters. Press the Return key when finished.

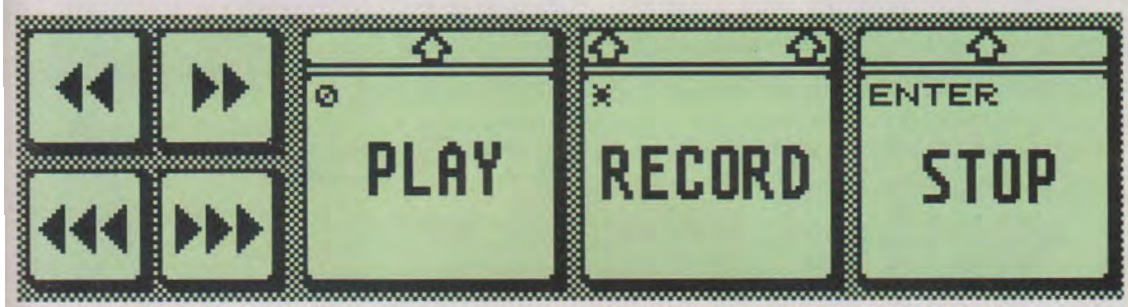


The Multi-Toolbox is used to copy, move or delete tracks or any defined events.

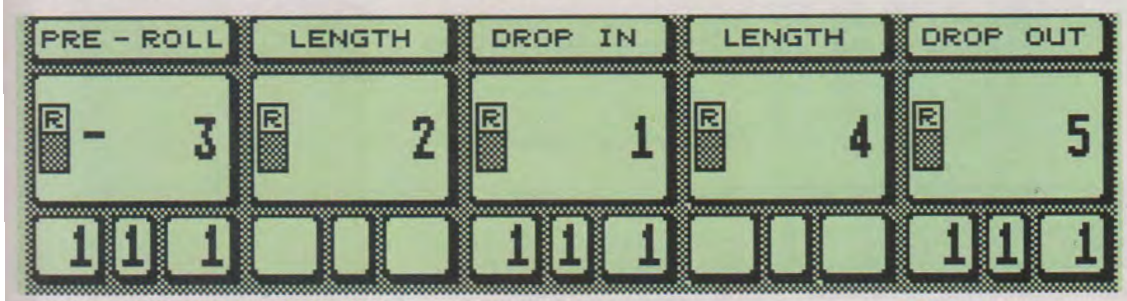
MULTI-TRACKIN'

Once you are happy with track 1, you can select track 2 for recording. Set it to a different MIDI channel and then repeat the same procedure with as many tracks as you like. Tracks are independent so you can record different sections on different tracks by simply selecting the track you want to record on and setting the locators. Tracks can be muted or solo'd by clicking in the S column.

You can set two tracks to output on the same MIDI channel; this can be especially useful when building up a rhythm track. You can record



Very much like a cassette player, 1st Track supports a control panel with two speed rewind and fast forward buttons in addition to the standard play, record and stop buttons.



The locators are used to set the section to be recorded and support automatic drop-in and drop-out.

INSIDE INFO

Geerdes MIDI Systems have a large selection of quality MIDI software. They are best known for the *SoftWorkStation* range which offers a synth editor and librarian integrated with a fully-featured 24 track sequencer. The *SoftWorkStations* need only 1MB to run and offer multi-tasking functions like editing sounds while the sequencer is playing. Recently, Geerdes have taken on MIDIShare, a new MIDI multi-tasking operating system from TimeTech in France. *StarTrack* is a new modular sequencer; based on *MIDIShare* it incorporates a GS module for editing sound modules like the Roland SC55 and JV30 in addition to a fully-fledged, multi-window sequencer.

#	S	NAME	CH	DEVICE	QU	VEL	TRPS	LOOP
01		drum mix		ORIGINAL				
02		bass		ORIGINAL				
03		a piano		ORIGINAL				
04		d guit 1		ORIGINAL				
05		windchim		ORIGINAL				
06		lead		ORIGINAL				
07		backs		ORIGINAL				
08		d guit 2		ORIGINAL				
09		backs 2		ORIGINAL				
10		Fade Out		ORIGINAL				
11		Tempo		ORIGINAL				
12		SYS SC55		ORIGINAL				
13		GS		ORIGINAL				
14				ORIGINAL				
15				ORIGINAL				
16				ORIGINAL				
17				ORIGINAL				
18				ORIGINAL				
19				ORIGINAL				
20				ORIGINAL				
21				ORIGINAL				
22				ORIGINAL				
23				ORIGINAL				
24				ORIGINAL				

The track list is where you can select tracks for recording or editing. For instance, you can name tracks, quantise or loop them.

the bass and snare drums on one track, the hi-hat and cymbals on a second track set to the same channel, tom-toms on another and so on.

LOOPING

You may find the loop function useful for rhythm parts. To use looping, first record a part, starting at bar 1. Then use the Loop field to set the length of the loop in bars. A setting of 4, for example, will play the first four bars on that track over and over. This has no effect on any other tracks and there is no reason why you can't set different tracks to different loop lengths.

EDITING TRACKS

To edit a track, first select the track so it is shown in black. Now, click on the Edit button on the left side of the screen. The edit page will open, covering about half of the screen.

A useful feature of 1st Track is that the track list, play and stop buttons will still work and can be used to quickly jump from track to track and start and stop the music - all while editing.

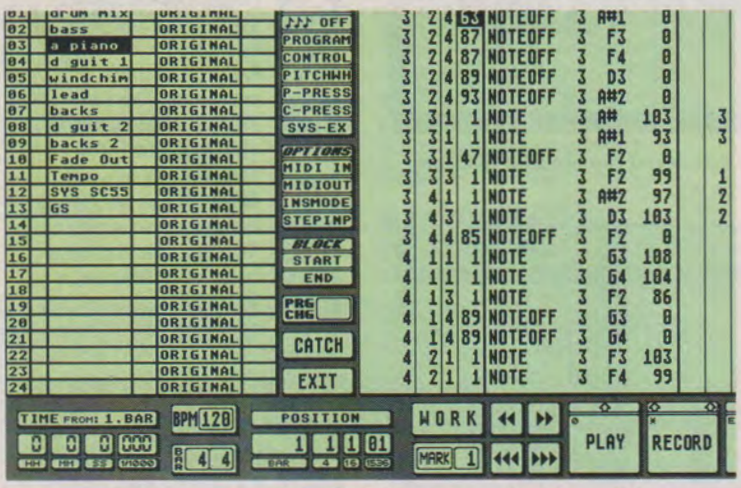
The editor displays a list of MIDI events on the selected track. You can use the scroll bar to scroll through the events. If you press on the Catch button, the event list will scroll with the music, allowing you to go to any event very quickly.

Each event occupies one line starting with its time position in the track and followed by its type. To edit any value simply point and click with the left mouse button to increase and the right one to decrease the value. You can also delete an event by first selecting it and then hitting the Delete key on the ST's keyboard.

OUTRO

We hope you have enjoyed your first recording session with ***1st Track***. Before you quit or move on to the next masterpiece, don't forget to save your work to disk by clicking on the Save button. You will be presented with the standard file selector where you can give the song any name you like as long as it ends with the extension .PTT. ***1st Track*** has many more functions like the multi-toolbox which allows you to copy and delete whole tracks or selected events.

The position indicators show the song position in bars and beats as well as displaying time elapsed since the beginning of the song. The BPM box is used to set the tempo and the Bar box sets the time signature.



The event editor covers only half of the screen, allowing quick access to the track list and play and stop buttons.

THE DEMO SONGS

The demo files included are from the Geerdes MIDIMusic Collection. Geerdes MIDISystems were established in 1984 and are now one of the biggest MIDI song file producers in Europe. The Geerdes MIDIMusic Collection contains over 1700 titles including chart hits, oldies and jazz/swing. An up-to-date disk catalogue is released every month.

1ST TRACK BOXES AND BUTTONS

- Track number and activity
S - Solo and mute track
Name - Track name and track select
CH - MIDI channel
Device - Name of device for specified MIDI channel
QU - Quantize
VEL - Increase or decrease track velocity
TRPS - Transpose track
Loop - Track loop function
All track list parameters are reversible
BPM - Set tempo in beats per minute
BAR - Time signature
Work - call the Multi-Tool-Box
Mark - set and call predefined locators settings
Pre-Roll / Length - set length of count-in before recording
Drop-in / Length / Drop-out - set drop-in and drop-out points and length of section to be recorded.
MIDI Clock - output MIDI clock to sync a slave drum machine or another sequencer
Cycle Mode - When on 1st Track will repeatedly play section between the drop-in and drop-out points
Pattern - Name of current song or pattern
Quantize Mode - When set to On+Off, both Note -On and Note-Off events will be quantized, maintaining note lengths. When set to On, only Note-On events will be quantized: quantizing will affect note lengths.
Loop Mode - Define value for Loop, either whole bars or single beats
Sync Mode - Normally internal, external mode will allow locking 1st Track to a tape recorder or another sequencer
MIDI Thru - Must be on if you are using a master keyboard or if your synth is set to Local off.
Beep - metronome beep on or off
All Notes Off - used for stopping any hanging notes
Load - Load song from disk
Save - Save song to disk
Load to Position - Loads a song to the current song position
Load MFile - Load standard MIDI file
Edit - Leaves to enter the event editor window

WORKING WITH YOUR COVER DISKS

First Word Plus, eleven exclusive games and utilities, and the best in PD – 22 programs in total that comprise over 2.2 Megabytes, all crammed onto two standard disks. But first, a word from our sponsor...

STEP BY STEP

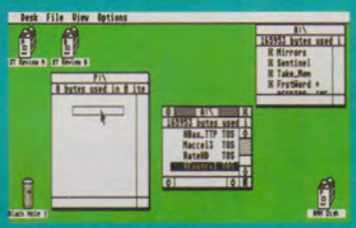
1 Format two standard double-sided, double-density disks from the desktop. Label them Disk A and Disk B.

2 Power-up your ST with Cover Disk #1 in the disk drive. You should see a brief loading screen telling you that a 250K RAM Disk is being loaded into memory. If you start up in low resolution, change to medium resolution.

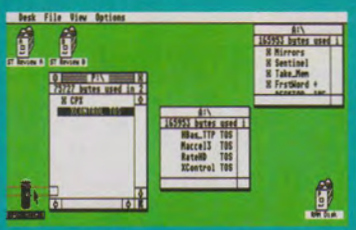
3 You should see three windows on-screen (Figure 1); the one labelled P:\ is a RAM Disk which is going to be used to get some of the programs onto the disks you've formatted. Grab XControl.TOS in the bottom A:\ window and drag it to window P:\ (Figure 2). This will now be loaded from Cover Disk #1 into RAM Disk P.

4 Double-click on XCONTROL.TOS in P:\; it will go through a self-extraction procedure and should result in a folder called CPX. Drag the XCONTROL.TOS file from window P:\ to the trashcan (aptly named Black Hole) and delete it (Figure 3).

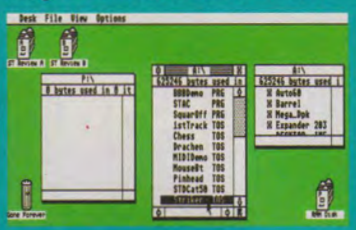
5 Put your formatted Disk #1 into the disk drive, drag the CPX folder from RAM Disk P:\ to the Drive A icon. The CPX folder will be written to your Disk #1. Finally delete the CPX folder from RAM Disk P:\.



Grab XControl.TOS from the bottom right window and drag it to the RAM Disk.



Having self-extracted XCONTROL.TOS to the Folder CPX, drag XCONTROL.TOS to the



Cover Disk #2 on-screen with Striker.TOS about to be dragged to the RAM Disk P:\.

6 Go through the same process for the other three .TOS files on A:\. Mirrors, Sentinel, Take_Mem and First Word Plus can all be run from our cover disk, although you can transfer these to your own disks as well if you please, again using the RAM Disk.

7 Once you have finished with the RAM Disk, delete the AUTO folder from our cover disk to prevent the RAM Disk from taking up precious memory. If you want to try some of these programs, turn your ST off and on again before starting.

8 Turn the ST off and power-up with Cover Disk #2 in the disk drive. Grab Striker.TOS and drag it to RAM Disk P:\. This program is too large to self extract on the RAM Disk, so place your Disk #2 in the drive and drag Striker.TOS from P:\ to icon A:\. Double-click on Striker.TOS on your Disk #2 and then trash Striker.TOS from your disk and from RAM Disk P:\.

9 Put Cover Disk #2 back in the drive and follow the same procedure that you used for Cover Disk #1. When your Disk #2 is full, place any other programs on your Disk #1 or any other disk you wish to use.

10 Finally put Cover Disk #2 back in the drive and delete the AUTO folder. Turn your ST off, put whichever disk you want to start with into the drive, power-up and away you go.

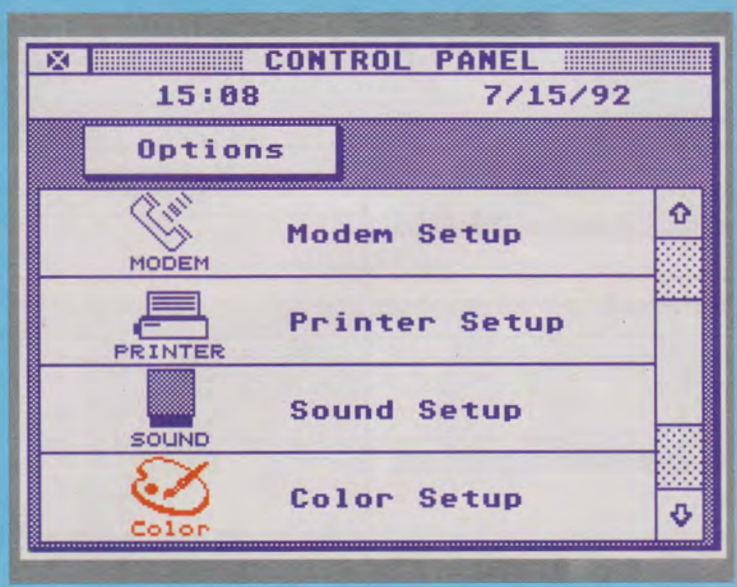
XCONTROL PANEL

XCONTROL ● ALL STS ● ACCESSORY ● DISK 1

Throw away your old control panel. Atari's configurable update is here

XCONTROL is the latest control panel from Atari. It was brought out on the newer Mega STE and TT machines, but it works with all TOS versions perfectly well. After decompressing, place XCONTROL.ACC in the root directory of your boot disk. Make sure that the folder CPX is in there too (although the ACC program needs to be outside of this).

There is a comprehensive manual included on the disk. The panel is very flexible: for example, you can have the CPXs RAM resident if you have the memory available; change the colour setup to suit yourself; even change the colours of the icons within the panel itself! For half Megabyte machines, it is recommended that you trim the panel down and do not have anything resident. Don't forget to place the CPX for Maccel 3 in the CPX folder and also any others you come across.

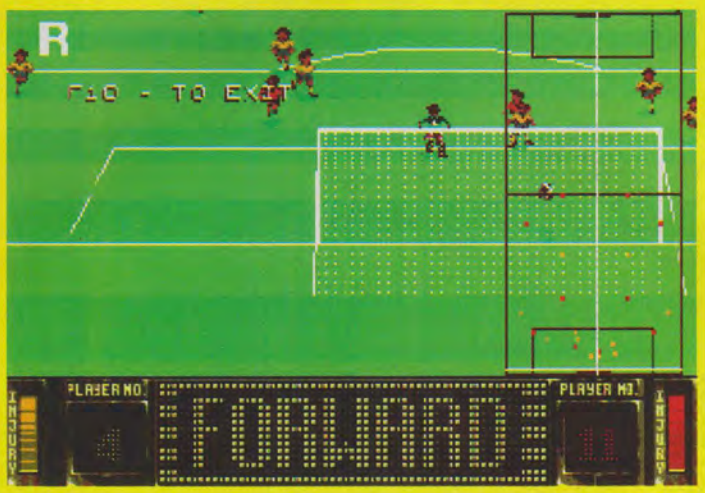


STRIKER

STRIKER ● LOW RES ● GAME DEMO ● DISK 2

Exclusive to Atari ST Review, a playable demo of the new all-action soccer game from Rage Software

This is a fast soccer game for you play. You are England or Brazil in this demo, but the full game features 64 different international teams, with eight formations per team, action replays and lots more. The game gives you a full minute of play or until one side scores. One of the fastest, smoothest soccer games around. The full game is reviewed on page 88 and gets our coveted Essential Buy award.



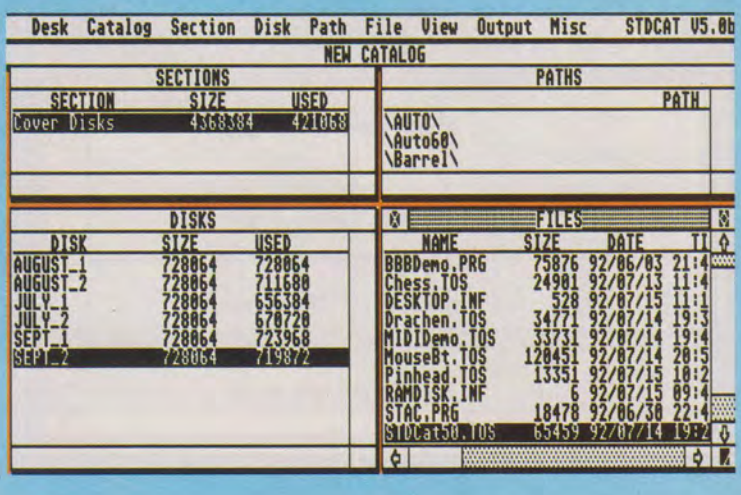
STDCAT 5.0

STDCAT V5.0 ● ALL STS ● PROGRAM ● DISK 2

Tidy up all your disks and catalogue them with this handy utility

This program is archived to save space. Copy the file STDCAT50.TOS to a blank formatted disk and run it to decompress it. As the abbreviated name suggests, ***STDCAT*** is a disk cataloguing utility which will organise your disks for you. There are four GEM windows displaying various parts of the catalogue and you have complete freedom as to how you want the information displayed.

To get started, copy the program on to a blank formatted disk and then run it. It should de-archive into two files, STDCAT50.DOC and STDCAT50.PRG. Read the .DOC file and it will tell you how to proceed. If you run the program, you may panic, as you'll get a message saying that there was a file open failure. This is because the file it's looking for doesn't exist yet. You need to create it! The rest is straightforward, so get listing those disks.



BARREL

BARREL ● ALL STS ● AUTO PROGRAM ● DISK 2

Roll out the barrel, a useful variable size printer spooler and more...

Barrel is a configurable printer spooler and RAM buffer with many other features. You can adjust the size of the buffer in units of 12k, so you can arrive at a size that fits the amount of memory you have. ***Barrel*** works by intercepting all the BIOS calls and redirects them to a RAM buffer, allowing the printer to do it's job and allow you to carry on using the machine. When you use the ALT-HELP screen dump, it will allow you to print the picture or save it to a disk.

Place the program in the AUTO folder of your boot disk and it will install itself. When you run it at any time after that, you will get the configuration menu so you can change the setup at any time during the work session.

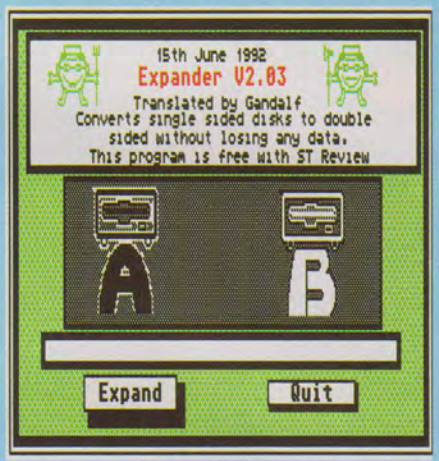
SDECODE.TOS is also provided to decompress pictures packed by ***Barrel***.

EXPANDER V2.03

EXPANDER ● ALL STS ● PROGRAM ● BY GANDALF ● DISK 2

Use all of the space on those single sided disks with this useful utility...

A wonderfully useful little program, this one. If you have recently upgraded to a double-sided disk drive, the chances are that you still have a number of disks that are single sided. This little gem will convert them to double-sided without destroying the original data. It is intelligent and will not allow you to destroy an already double-sided disk and it will inform you if the disk is write protected. The program was originally all in French, and this is the first updated version in English.



POWAQQATSI

POWAQQATSI ● LOW RES ONLY ● GAME ● BY GARY FRANKLIN ● DISK 2

From the Hopi language comes a complete exclusive chess program to amuse you budding Kasparovs

Choose between Human v Human, Human v ST or ST v ST . This is a full chess program with many advanced features. All are outlined in the .DOC file with the program. You can choose between 2D and 3D boards and many other functions. The menu is found by running the mouse to the top of the screen. The game runs in low resolution only though.

This program is archived to save space. Copy the file CHESS.TOS to a blank formatted disk and then run it to decompress it.

SOLITAIRE MAH JONG

DRACHEN ● HI RES ONLY ● GAME ● DISK 2

This solitaire version of the classic Chinese game looks deceptively easy until you've failed ten times...

Mah Jong is played with 144 block pieces with icons similar to those found on playing cards. ***Drachen*** uses the same pieces and starts off with them stacked five levels high. Click on two pieces which pair up, have no pieces above them and have free sides and they'll disappear. The idea is to continue doing this until all pieces are paired and have disappeared.

There are Hint and Pause modes and ***Drachen*** will even play a demo at one of two speeds. If you complete ***Drachen***, you can have your name put in the Best Times list, but don't hold your breath – we haven't been able to get in it yet!

MEGA DEPAK

MEGA DEPAK ● ALL STS ● PROGRAM BY MICHAEL WATSON ● DISK 2

Facilities to depack 40 different types of compression in one program.

Another exclusive program for you. This one will depack 40 different file types including Atomic, Fire & Ice, Jampacker, Automation, LSD, Pompey, DcSquish, Happy and others. Simply run the program and select the program to unpack. The software will tell you what kind of compression was used and then give you the opportunity to give a new name to the unpacked file.

MIRRORS

MIRRORS ● ALL STS ● TUTORIAL PROGRAM ● DISK 1

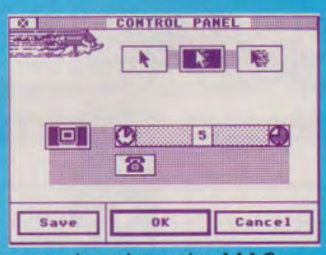
A HiSoft Basic programming tutorial that's fun too!

Looking in the MIRRORS folder will reveal two programs. MIRRORS.PRG is a full running version and MIRRORS.BAS is the basic source code. It is a very simple drawing utility to show you how to get mouse control in your own programming. A title screen greets you with basic instructions. Pressing the left mouse button will draw lines. Do the same again with the ALTERNATE key pressed and see what happens. Then try the control key, and then both together. To clear the screen, press the right button and to exit the program, press both mouse buttons together.

MACCEL 3

MACCEL3 ● ALL STS ● AUTO PROGRAM ● DISK 1

Tie a rocket to your mouse's tail

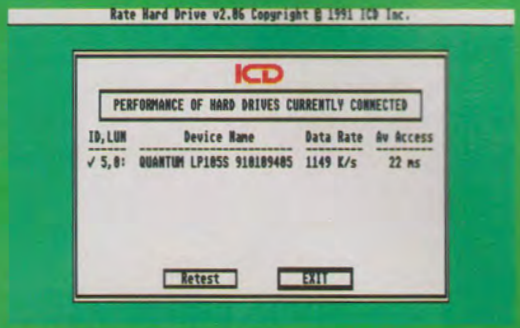


Place MACCEL.PRG in your AUTO folder, boot the disk and then run the program again for the options. You can adjust the mouse speed from normal, to fast, to super-fast. There is also a screen saver that will monitor activity through the RS232 port as well as the mouse or keyboard. The program is not new, but instead of running the program again, place the MACCEL.CPX file into your .CPX folder for XCONTROL and you can configure it from within that. This program is archived to save space. Copy the file MACCEL3.TOS to a blank formatted disk and run it to decompress it.

RATE YOUR HARD DRIVE

RATEHD ● ALL STS ● PROGRAM ● DISK 1

This is what we used for our tests of hard disk drives. See how yours compares



ICD's ***Rate Hard Drive*** utility will run a test on your drive and report back to you. It will identify the type of drive you have inside the case and will test the data transfer rate and the average access time.

This may not be totally accurate, as all drives vary, but it is a good guideline to let you know how well yours compares with the others. This program is archived to save space. Copy the file RATEHD.TOS to a blank formatted disk and run it to decompress it.

SQUARE OFF

SQUARE OFF ● LOW RES ONLY ● GAME ● BY ANDREW OAKLEY ● DISK 2

Another exclusive game to keep you busy.

Square Off gives you 50 levels of chaos to keep you going until next month, combined with some nice ***STOS*** graphics and synthesised voices to let you know how you're getting on. This game runs in low resolution and is joystick controlled. Load the game and start the fun straight away.

WRITE ERROR SENTINEL

SENTINEL ● ALL STS ● AUTO PROGRAM ● DISK 1

CodeHead presents a small AUTO program that verifies what's writing to disk with what's been written

Sentinel is another AUTO program. To run it, place it in your AUTO folder of your boot drive and, apart from the usual small installation notice when you first boot, that should be the last you see of it. It only takes less than one Kilobyte of memory and it watches for GEMDOS Fwrite calls which report the number of bytes written when a file is saved. If this doesn't match the amount requested, an alert box pops up and tells you. Not all programs do this, so it can save a lot of problems.

TAKE MEMORY

TAKE MEMORY ● 1 MB ● ACCESSORY ● BY OFIR GAL ● DISK 1

An exclusive programmers' aid that will help when checking your work for compatibility

What happens when you're programming on a 1040 ST and you need to know if it'll run on a 520? This is a programmers' aid that runs as an accessory and will take 512K from the 1040 (or upgraded 520) and leave you with the memory of the smaller machine. You can then test your program in half a Megabyte. You should be left with about 375K available, which is similar to what is left after booting the 520 with no accessories or AUTO programs loaded.

BRILLIANT BOFFIN BROTHERS

BBB ● LOW RES ONLY ● GAME DEMO ● DISK 2

A demo version of this commercial STOS game

This ***STOS*** game shows what the language is capable of. Good sound and graphics make this Trivia Quiz with prizes great fun. Load the game and press the space bar after reading the title page. The game is controlled using the function keys. Select a category and try to answer the questions. You can earn passes, bonuses and extras as you go. Get one wrong and you're finished. Press space to restart.

Is this really a quiz game? The Brilliant Boffin Brothers should appeal to trivia quiz buffs everywhere.

PINHEAD 2.1

PINHEAD ● ALL STS ● AUTO PROGRAM ● DISK 2

You'll wonder how you managed without this loading accelerator!

This is one of those little AUTO folder programs that make you wonder how you managed without it. Make sure that it is the first program in the folder, and it will speed up the loading of every other program that follows it.

The increase is quite remarkable. ***Pinhead*** works by just clearing the memory the program needs to run, rather than clearing all of the available RAM. This is especially noticeable if you have a RAM upgrade fitted.

The larger the available RAM, the faster the program appears to work. The program uses less than one Kilobyte of memory once it is installed and is fully compatible with all versions of TOS and all machines including the Mega STE and TT computers. More technical details are in the README file.

60 HZ THE EASY WAY

AUTO60 ● LOW AND MED RES ● AUTO PROGRAM ● DISK 2

Create a better working environment at the expense of just 763 bytes!

This is another item for your AUTO folder. Just 763 bytes long, it will reset the display to 60 Hz to sharpen the image and make the display a little cleaner. If you're using a television, it may cause a fuzzy, jumping screen. If this happens, or if you don't like the new display, just remove the program and reboot.

HISOFT BASIC COMPILER

HBASIC.TTP ● ALL STS ● HISOFT BASIC ADD-ON ● DISK 1

HiSoft Basic compiler to add to last month's HiSoft giveaway

This program is archived to save space. Copy the file HBAS_TTP.TOS to a blank formatted disk and run it to decompress it. This is the stand-alone compiler for your ***HiSoft Basic*** programs. To use it, just double click on the program and enter the name of the program to compile. It will then do the rest itself and report any problems to you. See the tutorial on pages 128-130 for more information.

MOUSE BOOT

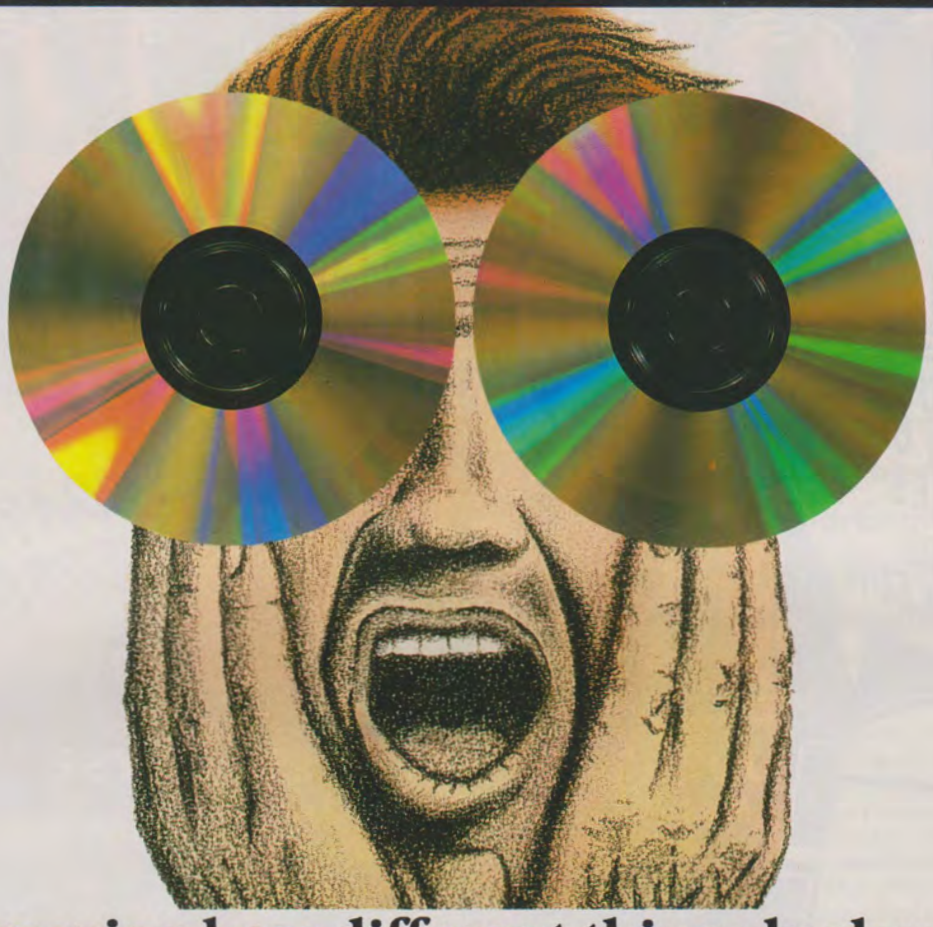
MOUSE BOOT ● ALL STS ● BOOTUP UTILITY ● DISK 2

Organise your bootup for each work session with this handy utility

Mouseboot will help you organise your ST when you boot up by allowing you to select which desktop and accessories to load. A delightful custom desktop greets you and all items are selectable with the mouse.

Alternative desktops can be set up – you could, for example, have one for your word processor, one for ***Neodesk***, one for DTP or any other programs you may wish to run from the start. Again, there is a full manual provided and it is recommended that you read this before going any further. The program is archived.

13▷▷20▯▯ BANKING STARTS HERE▽



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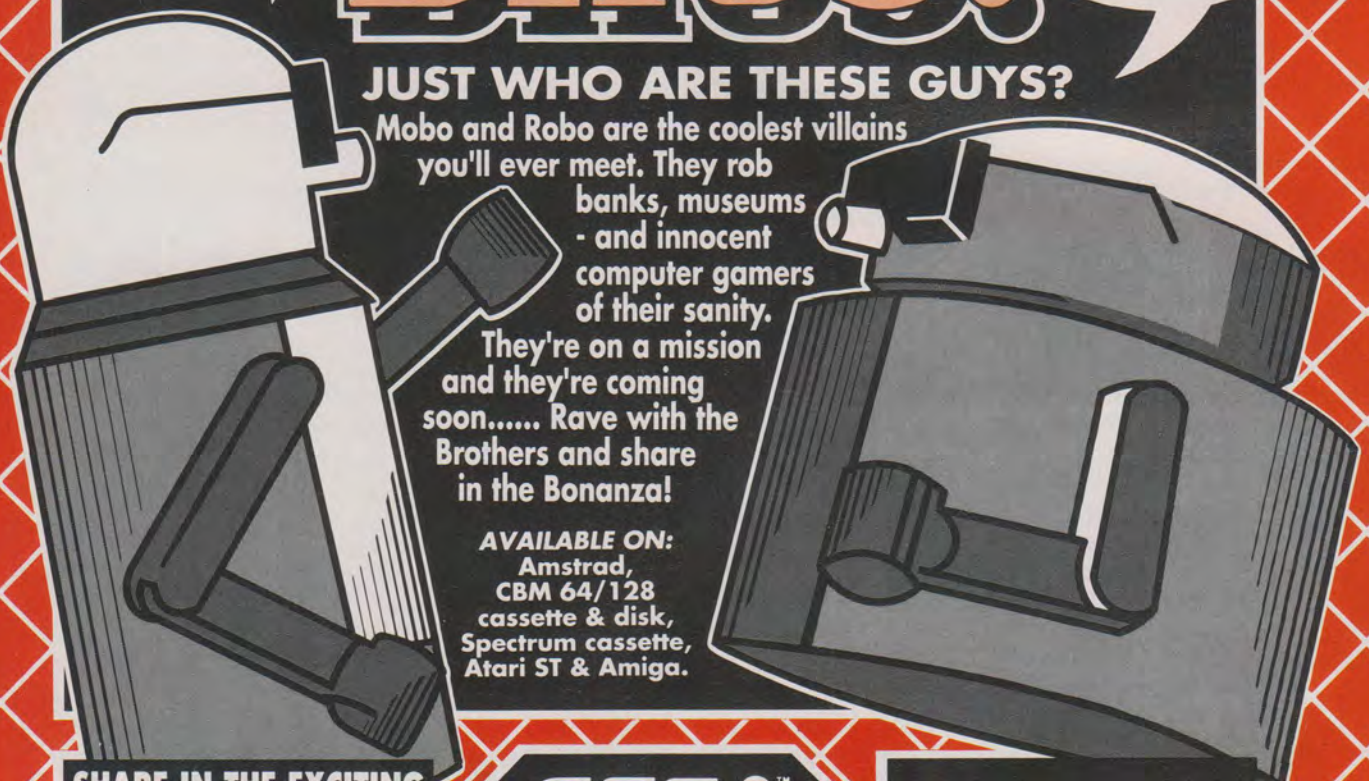

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NEXT MONTH

LASER TRAIL BLAZER! WE LOOK AT THE BEST OF THE CHEAPEST LASER PRINTERS ON THE MARKET!

The price of a laser printer continues to fall, giving more people the opportunity to produce fully professional looking documents at a fraction of the price of using bureaus

The price of laser printers is continuing to tumble and low prices now longer mean short specifications, as the recently released Ricoh LP1200 laser, which has come in with a high specification of on-board memory (2MB), flash ROM and fast printing, goes to prove. How will it fare, however, against six other similarly priced units?

We look at a magnificent seven laser printers in a full, comparative review to tell you which is the best buy laser printer for less than £800.

PLUS SO MUCH MORE!

- BACK TO SCHOOL – Next month we give you the round-up of the very latest in educational software for your ST. You may not want to improve your computer's maths but we'll be looking at packages that can improve the learning potential of anyone.

- INFORMATION TECHNOLOGY – Do you need to store, retrieve and correlate information? Then you really need a database and next month we'll be looking at just what packages you should be using to help with each of your specific needs.

- SCANNERS REPORT – We'll be looking at hand scanners and asking, How? Why? And how much? If you're in the market to scan in graphics for your DTP or art programs then this is the definitive test to read before you buy.

- LATEST OPERATING SYSTEMS – TOS 2.06 is here and we'll be taking a close look at the latest version of the ST's operating system. TOS 2.06 gives improved file handling, new desktop icons, macro keys and a host of other functions to your ST.

ON DISK

- Yet another mammoth package of both commercial and exclusive products! Next month's product is so hot that it'll set the ST market reeling in shock! Don't believe us? Don't be caught out by inferior cover disks, get ST Review next month!

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ST/92

PRODUCT TESTS

We take a closer look at several monitors on page 52 and come up with some ST Review recommendations.

Nice mice? Page 48 gives the low-down on the little critters...

Hard drives. Tried, tested, and backed-up on page 34. We even show you how to build your own for a fraction of the cost...

This month, we take a look at ST hard disk drives, monitors and mice and offer advice to anyone who's spending hard-earned cash on hardware.

Hard disk drives come in a variety of sizes. We have compared all the popular entry level units from 40 to 50 Megabyte of storage capacity and tested them all – helping you to make the right decision when buying an expensive item.

Is your mouse showing signs of ageing? Then it may be time to buy a new one. We look at what's in the shops at the moment and compare them in the first part of a two-part comparison test of replacement mice costing from £15 to £50

Monitors come in all shapes and sizes, but just which ones are the best for your purpose? Mono or colour, stereo sound or big screen – All your questions are answered on page 52.

ST Review product tests are second to none – So if you want value, read on!

HARD DRIVING

It doesn't really matter which hard drive you buy as they're all similar and do exactly the same job – right? Wrong! Andrew Wright looks at five of these sought-after peripherals

If you want to run bigger programs, you have to buy more memory. If you want to run them faster, you have to get an accelerator card. But if you want to load and run them faster and store them all where they can be accessed in a second or two, a hard drive is the only answer. Buying a hard drive is guaranteed to change your life. Not only will your programs load between six and 20 times faster, but you can access hundreds of them without having to do more than click your mouse. Gone are the days of hunting through boxes for badly labelled floppies or watching ***Timeworks*** grind your floppy disk into dust. Life will never be the same again when your first hard disk drive arrives.

Working with a hard drive is far more convenient. Imagine a GEM desktop with four additional icons, each behaving as if it was a high-speed floppy disk drive and containing around 12 MB of files and programs!

These icons are the result of dividing the drive up into usable "partitions" (you can have one large one or lots of small ones, the choice is yours). The speed is important too, of course. Programs that use overlays, such as ***Timeworks***, will run much faster, especially when switching from frame to text mode. Working on big files like source code, sound samples and greyscale images is a lot more convenient as it takes little time to save a file every few minutes on a hard drive. Even booting up is quick and easy – if you need a new set of accessories or AUTO folder programs, to load a replacement desktop or even to change a disk-based operating system, rebooting only takes a few seconds.

BIGGER IS BETTER

The current trend is towards bigger drives, but this is caused primarily by the state of the PC market. The new graphical user interfaces such as Windows require horrendous amounts of memory and the recommended size for a PC hard drive is 80 Megabytes.

The ST is far more memory efficient and much smaller drives are just as useful unless you're into DTP, graphics or music in a big way. However, there is a trade-off between drive size and speed in that the larger drives are invariably faster. Drives of 20 or 30 Megabytes should be avoided unless you can pick one up very cheaply – the sensible entry level is now the 40 to 50 Megabyte models reviewed here.

Most hard drives conform to the Small Computer Systems Interface standard – SCSI for short and pronounced "scuzzy". The ST has its own version of SCSI called ACSI (Atari Computer Systems Interface) and in theory, up to eight different devices can be "daisy-chaining" together on the SCSI bus. So if your existing hard drive starts to get crowded, it's not the end of the world!

Hard drives are so much faster than floppy drives that measuring their speed can often seem superfluous; but there are differences in design and construction which mean that some drives stand out well above others. The figures that are usually quoted are average access time (how fast it takes the drive head to travel from one place to another) and data transfer rate (how fast the drive can shift the data). The Quantum drive mechanism used in three out of the five drives reviewed here has a quoted average access time of 17 milliseconds and a data transfer rate of over two Megabytes per second. Unfortunately, the host adapter card can reduce this figure considerably.

In normal everyday use, the difference between drives becomes much less noticeable. The drives are idle for most of the time and it's only when large chunks of data are swapped around that the speed starts to tell.

Removable hard disk drives are an interesting alternative which are coming down in price all the time. The very idea of having a hard disk drive which allows you to remove the hard disk itself might well puzzle some people. Why bother? The object is to make data transfer easier – and we're not talking about a few hundred Kilobytes. Serious desktop publishing applications can produce PostScript files of several Megabytes and full colour images ranging up to around eight Megabytes. With half a dozen of these in a document, transporting them to a DTP bureau by floppy disk would be a nightmare!

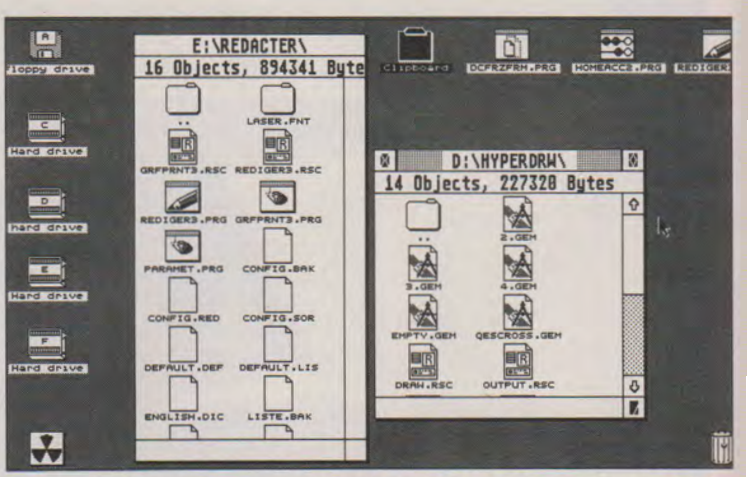
A HARD CHOICE

The step up for first-time users is so great that whether you have a 20 ms, 30 ms or even an 80 ms drive becomes irrelevant. Later on, however, as the novelty wears off, the disk becomes full to capacity and you start to look at ways of speeding it up.

The best way to buy a hard disk is to look at your present needs but keep one eye firmly on the future. What seems huge today may be small tomorrow – and what's more, it'll be difficult to sell. The same goes for speed – the day will come when that bargain basement 30 Megabyte drive will really have you seeing red!

All of the drives reviewed here are competent performers with adequate capacity for normal use. The Protar R44 can only be recommended if you need its specialist capabilities. If you want a really fast drive, the Ladbroke Datapulse wins hands down. Figures and tests mean little here – you can really notice the difference. The Hunter Carnegie, Protar 50DC and Gasteiner Megadrive all demonstrate roughly comparable performance and price, although the latter is let down by its poor utility software. The Datapulse and Carnegie are good drives but if I was buying, I'd opt for the Protar. It may be expensive, but it's fast, ultra-quiet, well-made and has by far the best software.

Each of the drives was supplied with power lead (and plug) and a suitable DMA cable, both of an appropriate length. My biggest complaint was the lack of specific information on the particular drive supplied. Without exception, all five were supplied with vague documentation which said nothing about that model.



A typical "hard" environment – the GEMINI replacement desktop and four hard disk partitions. Is big beautiful?

HUNTER CARNEGIE 45 MB

The Carnegie is a neat-looking drive with a lot to offer – including a reasonable price tag. . .

Hunter is a relatively new name in disk drives and the Carnegie 45 MB model is a brand-new model. It is a neat-looking drive and comes encased in grey metal with an on/off switch on the left front panel. There is both a drive activity and power light on the right-hand side.

The mechanism is a Rodime embedded SCSI disk drive unit with onboard cache and an ICD AdSCSI host adapter. It has an external SCSI selector switch and a DMA through port on the back. One advantage that comes with having an ICD card is the presence of an onboard clock which can be used to automatically set the ST's internal clock using a software utility provided.

SOFTWARE

The Carnegie comes with a disk of very useful ICD software utilities which cover everything from setting up the drive partitions, deciding on the amount of memory to allocate, through to a RAM cache and testing drives.

The drive is both autoparking and autobooting (autoparking prevents head damage when the drive is moved). The drive is supplied without a dedicated manual but the AdSCSI card has a disk full of utilities and its own 70-page manual. The public domain Vault backup software has also been provided. The Carnegie is quiet in operation; it's also attractive to look at and well put together. It certainly isn't the fastest when tested under lab conditions but in actual use, there's very little between it, the Protar 50DC and the Gasteiner Megadrive. As the cheapest in the line-up, it's an excellent buy.

Testing, testing, ICD

"An excellent all-rounder at a tempting price"

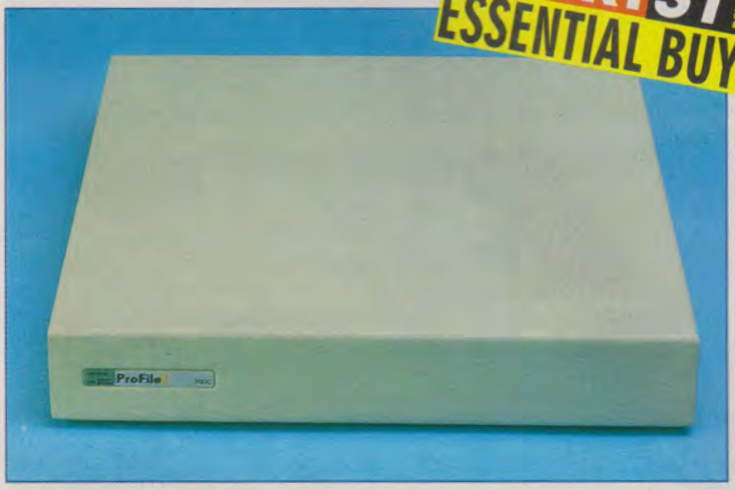
NAME: HUNTER CARNEGIE 45 MB
COMPANY: HUNTER BUSINESS SYSTEMS
CONTACT: 0382 28245
PRICE: £329

SPEED	✪✪✪✪✪
SUPPLIED UTILITIES	✪✪✪✪✪
DOCUMENTATION	✪✪✪✪✪
FEATURES	✪✪✪✪✪
NOISE	✪✪✪✪✪
VALUE FOR MONEY	✪✪✪✪✪

OVERALL **80%**

PROTAR 50DC

ATARI ST REVIEW ESSENTIAL BUY



Our star buy this month: German reliability from Protar brings us a drive so quiet that you won't even notice it's there

The Protar 50DC is a 52 Megabyte drive which is based on the excellent Quantum LP52 mechanism. Its excellent German engineering shows through from the start – Protar is probably to ST disk drives what Rolls Royce is to car manufacture and the build quality is first class.

SWITCHES

Sadly, the on/off switch is at the rear, which can be a nuisance, but there is an extra SCSI port to make up for it, as well as standard DMA in and DMA out ports. They're labelled in German, but we all know that Eingang means "in", don't we?

The DMA selector switch is also on the rear. Two rather small lights on the front indicate power on/off and drive activity. The Protar drive is so quiet in operation that it's hard to tell whether it's actually on or not. This was by far the quietest of the drives tested due to the thermostatically controlled fan which only comes on when the drive is very warm. There is also space inside the case for a second drive, complete with all leads and SCSI cable.

RAM CACHE

Protar's Manager software is a superb disk utility program that does almost everything in a single program, although there are other standalone programs on the same disk, including a very effective RAM cache.

The Protar is an excellent drive with a formidable reputation for reliability and after sales support. You won't get shattering performance, but you will get a top quality drive with the best software around.

Protar's software is fully graphically oriented and works extremely well.

"This is truly the Rolls Royce of ST hard drives"

NAME: PROTAR 50DC
COMPANY: PROTAR
CONTACT: 0923 254133
PRICE: £376

SPEED	✪✪✪✪✪
SUPPLIED UTILITIES	✪✪✪✪✪
DOCUMENTATION	✪✪✪✪✪
FEATURES	✪✪✪✪✪
NOISE	✪✪✪✪✪
VALUE FOR MONEY	✪✪✪✪✪

OVERALL **90%**

PROTAR R44

Sharing many features with the 50DC, this is a specialist tool whose merits are reflected in its price

The Protar R44 is identical in size and shape to the 50DC, but it has an opening on the front for the removable hard disk. It is equally well equipped, using the same software to format and partition the disk and benefiting from the same excellent build quality as its cousin.

INSERTION

The Protar R44 has to be turned on before the removable disk (which is often referred to as a cartridge) can be inserted into the front opening in much the same way as a floppy drive.

The drive then goes through its own short diagnostic self-test process and a red light on the drive opening itself comes on, followed by a green light when the cartridge has been checked and is found to be correct.

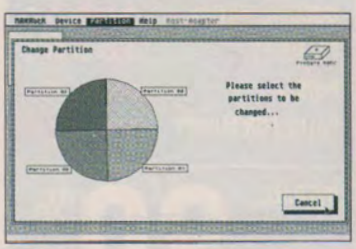
There are also two lights for power on and drive busy, and these are also identical to the lights on the Protar 50DC.

PATIENCE IS A VIRTUE

The cartridge can be removed with the power off or the power on, but 30 seconds of inactivity is recommended to ensure that the disk has stopped spinning. In action the drive is noisy but only when the Syquest cartridge is being read or written to. When simply waiting, as a drive so often is, the R44 is quiet enough.

Performance is comparatively slow, but it's still several times faster than slow disk drives such as the Atari Megafile. Additional cartridges cost around £100.

This is a specialist tool with plenty in its favour – in fact, the only thing against it is its price, which reflects the fact that it is really designed for serious users.



Let's play ... partitioning a drive

"A specialist drive for the discerning power user"

NAME: PROTAR R44
COMPANY: PROTAR
CONTACT: 0923 254133
PRICE: £580

SPEED	★★★★☆
SUPPLIED UTILITIES	★★★★★
DOCUMENTATION	★★★★☆
FEATURES	★★★★☆
NOISE	★★★☆☆
VALUE FOR MONEY	★★★☆☆

OVERALL 77%

GASTEINER MEGADRIVE

This is a quiet, fast drive which is, unfortunately, let down by poor software

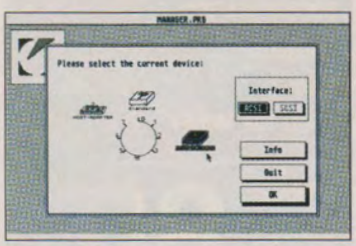
The Gasteiner Megadrive is based on the same Quantum LP52 mechanism as the Protar 50DC and Datapulse drives, although the data transfer performance lies somewhere in between. In normal use, this difference isn't noticeable.

The drive is encased in a rugged but rather poorly finished case which doesn't match the ST's familiar grey tone. One of the DMA ports was a little wobbly, but the drive ran perfectly quietly and booted quickly to reveal the pre-formatted partitions.

The trouble came when we had to reformat the drive for the standard test – the Gasteiner software, ***SDManage***, just wouldn't recognise the drive at all, despite the fact that the drive had booted and was able to load programs and copy files from it! We had to resort to running Protar's utilities on it, formatting it as required and then running the program again. This time it worked and allowed full re-partitioning.

If you get depressed about this kind of thing, the software's online help will cheer you up – it contains some of the most hilarious translation I've ever come across. Next, we tried to change the caching parameters and the software again tried to tell us that the drive wasn't there! I could perhaps understand it if the software wasn't designed to work with the drive...

The manual is at least an attempt at conveying what hard disk ownership is all about, although it could have been more specific. The pre-formatted disk also includes a PD back-up utility. In terms of overall value, the poor software is a big negative but the drive is pretty fast and surprisingly quiet.



The software looks good and contains plenty of features.

"Speed and capacity for tight budgets"

NAME: GASTEINER MEGADRIVE 52 MB
COMPANY: GASTEINER TECHNOLOGIES
CONTACT: 081 365 1151
PRICE: £349

SPEED	★★★★☆
SUPPLIED UTILITIES	★★☆☆☆
DOCUMENTATION	★★★☆☆
FEATURES	★★★☆☆
NOISE	★★★★☆
VALUE FOR MONEY	★★★★☆

OVERALL 79%

LADBROKE DATAPULSE

This extremely fast drive comes complete with a few useful extras

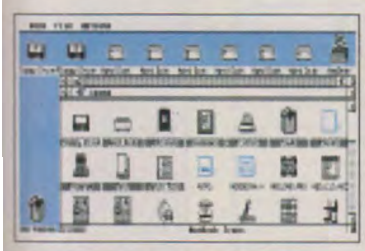
The Ladbroke Datapulse is a 52 MB drive based yet again on the cached Quantum mechanism but it achieves far better performance in real terms. The grey metal case won't win any style awards, but the drive is functionally designed and easily capable of supporting a monitor. Build quality is fairly mediocre but there were no obvious defects.

The drive contains an ICD card and has the same set of useful utilities as the Hunter, but the preformatted disk contains several useful utilities and several good demos including ***Neodesk*** and ***Midistudio***.

I know this is only a sales ploy but most people will appreciate a company which has gone to the trouble of installing them.

When first turned on, the drive is extremely quiet, having no fan, and the performance is blistering. It is noticeably faster than the others and none of them are slow, by any means. I've not seen a faster, commercially available ST drive in the sub-100 Megabyte range. After hard use, such as transferring data constantly for a couple of hours, the temperature of the case starts to rise. I've experienced this before with powerful, inadequately ventilated drives and although it can be alarming, this one remained within the manufacturers' tolerances. It does leave an uncomfortable feeling though.

The only documentation supplied is the ICD host adapter manual but the drive is fairly straightforward with a simple on/off switch on the front and ports to the rear. There is a single light on the front, showing green for power on and red for drive activity (but obviously not at the same time!). If you want a fast drive, you certainly won't be disappointed with this one.



Only a demo but just the thing to put on your hard drive.

"Must be the fastest hard drive available for the ST"

NAME: DATAPULSE PLUS 52 MB
COMPANY: LADBROKE COMPUTING
CONTACT: 0772 203166
PRICE: £359.00

SPEED	★★★★★
SUPPLIED UTILITIES	★★★★★
DOCUMENTATION	★★★★★
FEATURES	★★★★★
NOISE	★★★★★
VALUE FOR MONEY	★★★★★
OVERALL	82%

LEARN THE LINGO

Hard drive jargon explained

Most hard drives conform to the Small Computer Systems Interface, SCSI, standard but the ST's version of SCSI, called ACSI, is a little different – hence the need for what is known as a host adapter to convert ACSI signals into true SCSI.

Even then the ST cannot directly address the hard drive – it needs a hardware controller to handle all read/write operations, interrogates the hard drive and pass the information back to the ST's operating system via the DMA port. The DMA or Direct Memory Access, system is Atari's method of speeding data transfer and it works at very high speed. Unfortunately the other parts of the system tend to slow it down considerably Some drives, the ST506/412 type, require a separate SCSI controller card but embedded SCSI devices such as the Hunter Carnegie and Datapulse have the SCSI controller built in. Only a host adapter is then required.

PLAYING THE NUMBERS GAME

Any device which uses the DMA port on the ST must have a unique SCSI address (0-7). Most hard drives use SCSI 0. the Atari laser uses SCSI 5 or 7 and the clock in the ICD host adapter uses SCSI 6.

If you add a second hard drive with a separate controller you must give it a unique SCSI address, usually by altering the DMA selector switch on the rear of the hard drive. Having this facility (as all the drives that we reviewed did) is a very useful feature.

Another parameter, called LUN (which stands for logical unit number) is used to differentiate between different ST506/412 drives hooked up to a single controller.

As most controllers can handle two drives, one is set as LUN 0 and the other is set as LUN 1. SCSI drives with embedded controllers each have their own personal controller and are always LUN 0.

CACHING IN

A disk cache is memory set aside for the hard drive to use

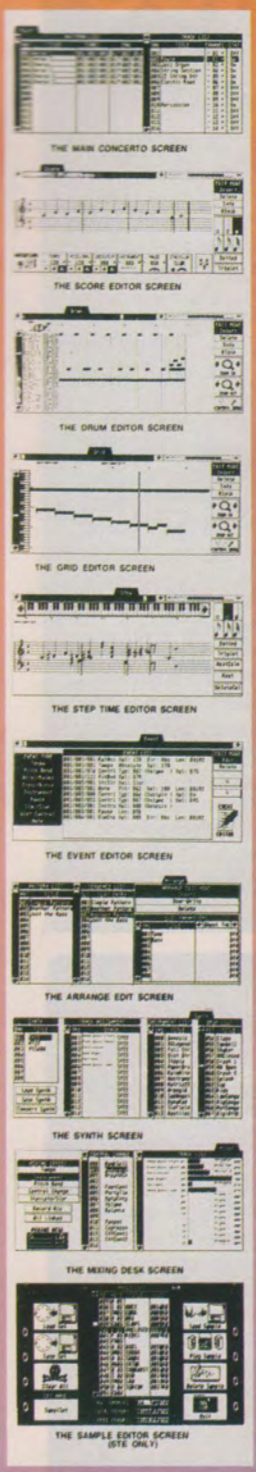
Every time the ST reads from disk, more sectors of the disk are read in than are actually necessary. Write caching simply means that the cache is filled up before the disk is actually accessed, which means that larger chunks of data can be written in one go. An onboard (hardware) cache works in a similar way but it is out of the user's control. All of the drives under review were supplied with software caching programs which improved copying performance considerably. The Protar cache program improved performance by 40 per cent on both Protar drives while the ICD cache speeded up the Carnegie by 46 per cent and the Datapulse by 30 per cent. Caching the Gasteiner drive didn't seem to make much difference but given the software problems, thorough testing was a little difficult.

Most users want to partition drives to suit their own way of working, even though most commercial drives are pre-formatted. Setting up the drive in this way is a matter of running the appropriate hard disk utility software, selecting the number and size of partitions required and formatting the drive. The software also lets you check for and map out bad sectors – sectors which are unusable due to minor defects in the manufacturing process – as well as a score of other minor functions.

Next, the hard disk driver has to be installed. This is a small program that sits in your boot partition and enables you to load accessories and AUTO programs from the hard drive instead of from a floppy. Write verify can even be turned on or off but using the verify facility can slow down read and write operations by up to 20 per cent.

The two Protar drives can be booted from any partition simply by holding down the appropriate key after resetting the computer, and all the drives that we reviewed had facilities for write protecting chosen partitions to protect valuable data or even programs themselves.

complete
The complete MIDI sequencing solution



CONCERTO is a powerful but friendly music program with which you can compose and arrange any type of music from Classical to Rock, Pop, New Age and Jazz. Use it with any MIDI instrument. Simple, step-by step instructions help you set up the program and equipment.

CONCERTO is mouse-driven with keyboard short-cuts for most operations. It has easy-to-use GEM-like controls but with many advantages over GEM such as the 'instant scroll' function of the scroll bars and optional pull down (rather than GEM'S pop down) menus. The unique Card Tab Index system gives you instant access to nine control screens.

In CONCERTO you can record music on up to 24 Tracks and assign them to 100 Patterns. Link the Patterns together in the Arrange Window with a few simple mouse clicks to form a complete Song. Making music has never been easier.

CONCERTO has five Editors:-

The Score Editor shows music on the stave in traditional notation. Notes can be clicked into place on the score and Staccato and Slur instructions let you control the phrasing and articulation of the music. Programmable Pauses (Fermata) avoid messy tempo change instructions.

The Step-Time Editor is ideal for entering difficult music lines a note or a chord at a time directly from your keyboard. You can also enter notes from an on-screen keyboard, useful if you have a keyboardless expander such as the Roland MT-32.

The Grid Editor is ideal for users who don't read music. A cross-hair cursor makes it easy to get the pitch and duration of the notes exactly right.

The Drum Editor simplifies and aids the creation of drum patterns making it easy to program rock steady rhythms. The Drum Operations window contains powerful drum edit tools including Velocity Changes and drum substitution.

The Event Editor lets you view and edit every event in your music with surgical precision.

CONCERTO has many features only previously found on sequencers costing up to ten times as much:-

In the Mixer Window you can mix five effects into your song including tempo, pitch bend and Control changes. You can 'ride the faders' mixing the volumes of each track just like a mixing desk in a recording studio. Select sounds by name and click them into the score. A unique The Innovative Synth Window can hold details of up to eight synthesisers. Select sounds by name and click them into the score. A unique Synth Converter automatically converts (maps) one synth's set of sounds and drums to another.

The Control Drawer lets you draw tempo and Controller data onto the screen with the mouse. Add pitch bend or modulation to your music, even if your keyboard doesn't have a pitch bend or modulation wheel.

CONCERTO has many powerful editing and processing facilities:-

Programmable Tempo Change (Accelerandos and Rallentandos).
Programmable Volume Change (Crescendos and Diminuendos).
Search and Replace - find and optionally replace notes of a selected pitch.
Fill - fill a section of a Pattern with a note of a specified pitch, useful for sequenced lines and drum patterns.
Force - convert pitches, velocities and note lengths to a specified value.
Remap - compress or expand a pattern to half or twice its length.
Note Pad - store important details about your song.
Transpose - alter not only pitch but also velocity values.

Clock - shows exactly how long the 'tape' has been running.

Other useful built-in features include Disk Format, New Folder and Rename file operations.

CONCERTO has a wide range of powerful MIDI tools:-

The MIDI Filter will filter out unwanted MIDI instructions and CONCERTO'S special effects.

Keyboard Split lets two halves of any keyboard record on separate MIDI channels.

The powerful Systems Exclusive function can save and load voice data from your synths.

The MIDI File Converter converts Standard Midi Files into CONCERTO format giving you access to vast library of pre-recorded music. You can also pass on your music to anyone with a MIDI file-compatible sequencer.

Concerto - The Complete MIDI Sequencing Solution

microdeal

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BUYERS GUIDE

So how do the hard drives compare?

	DATAPULSE	CARNEGIE	GASTEINER MEGADRIVE	PROTAR 50DC	PROTAR R44
Cost	£359.99	£329	£349	£376	£580
Capacity	52	45	52	52	45
Cost per MB	£6.92	£7.31	£6.71	£7.23	£12.89
Mechanism	Quantum LP52	Rodime	Quantum LP52	Quantum LP52	Syquest SQ555
Cache	64K onboard	Onboard	64K onboard	64K onboard	None
Size (DxWxH mm)	290 x 300 x 55	280 x 280 x 70	325 x 325 x 65	345 x 335 x 60	345 x 335 x 60
DMA ports	In, Out	In, Out(*)	In, Out	In, Out (SCSI)	In, Out
Avge access time	25 ms	30 ms	25 ms	N/A	N/A
Data transfer rate	1069 K/s	516 K/s	1104 K/s	N/A	N/A
Copy test	169	262	222	264	323
Delete test	24	47	47	47	64
Cables	DMA	DMA	DMA	DMA	Power lead
Clock	*	*	-	-	-
Lights	Comb pow/acc	Sep pow / acc	Activity only	Sep pow/drive acc	Comb pow/acc
DMA switch	Front	Rear	Rear	Rear	Rear
Fan	-	*	*	*(1)	* (1)
Ventilation slots	-	Base	Side	-	-
Autoboot	*	*	*	*	*
Autopark	*	*	*	*	*

NOTES

The ICD utility RATEHD.PRG was used to produce data transfer and average access times except in the case of Protar drives. All the drives were formatted with the same number of equal partitions. For the copying tests the same 9 MB of data was transferred three times between the same alternate partitions and the average time taken recorded. The delete test was the time taken to delete the same 9 MB of data.

KEY

*** = Additional SCSI optional**

(1) = thermostatically-controlled

INSIDE INFO

A hard drive consists of one or more rigid disks called platters, coated in a special, hard-wearing magnetic material. The platters spin at a constant rate of around 3600 rpm, even when no data transfer is taking place, and all spin around a common axis. Data is read from and written to the platters by means of one or more heads, usually one to each surface.

As it is enclosed in a vacuum sealed casing, the heads can be placed very close to the surface of the disk – a distance of only a few microns – and the platter can be spun at much higher speeds than a floppy disk drive, which typically revolves at 300 rpm.

The high speed of rotation, coupled with the higher density of the magnetic medium, enable much higher data access speeds to be achieved as reading and writing is much quicker when compared to floppy disk drives.

There are basically two methods of encoding data on the drive itself – MFM (Modified Frequency Modulation) and RLL (Run Length Limited). The MFM format is the older of the two and hardly seen these days as the RLL format, with more sectors, has fifty percent greater capacity and a faster data transfer rate. Drive platters are either 3.5" or 5.25" in diameter and are stacked in either half or full height depending on the drive capacity and number of platters.

Hard disk backup is a real chore – unless you choose the right software to help. Andrew Wright looks at the current options. . .

I can think of a hundred and one things I'd rather do on a Friday afternoon than back up a large hard disk heaving with files. The trouble is that every day that goes by without a backup is a day closer to disaster. I've already experienced the knife in the guts feeling produced by a hard disk catastrophe – and waved goodbye to a three thousand word article that I'd just spent all day on. Every time I hit a key retyping it in, I promised I'd never, ever miss a backup again.

The obvious reason for backing up a hard disk is to prevent loss of important data. Hard disks do crash, sometimes for no apparent reason. Power surges can corrupt parts of the disk as can a head crash, caused by carelessly knocking a working hard drive. If the heads happened to be hovering near the file allocation table or directory, well it's probably goodbye to that particular partition, at the very least.

Alternately, it can be something as simple as using untested software – it's amazing how many hard disk owners throw caution to the wind when a new and very neat-looking utility comes along that promises to clean up the drive or rid it of viruses. And the journalist who eagerly plugged in a PC emulator and created two DOS partitions – right on top of an article he'd just finished? It still makes me cry...

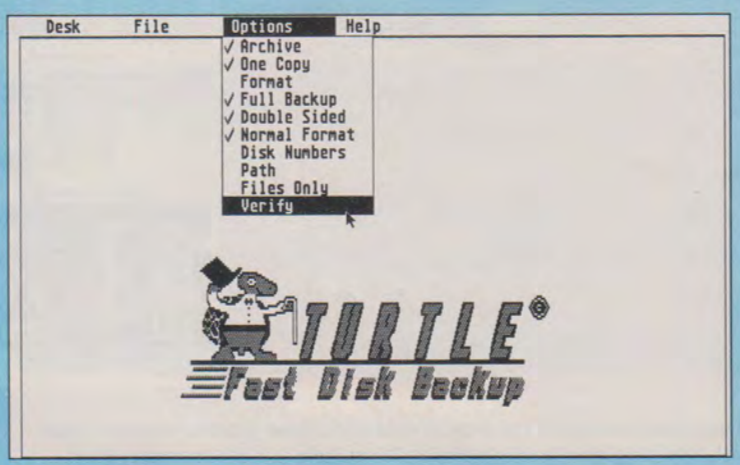
There are several methods of backing up a hard disk. The manual method simply involves copying all your files directly on to a rather large pile of floppy disks. This method is strictly for masochists and Tibetan monks needing time to meditate.

Another method is to archive the important files using one of the compression utilities and then save them to floppy. This takes even more time but uses fewer floppy disks. The other argument against compression is that if something happens to just one file, you can't easily get at it again.

The third alternative is to use a dedicated backup program that automates the process as far as possible. A good backup utility will let you choose which files to back up, whether to compress them or not, format the floppy disks for you and, just as importantly, it will let you copy them back to the hard disk whenever they are required.

BEATING THE BACKUP ACHE

TURTLE



Turtle's options.

If you've got a small-ish hard disk then this could be the ideal program for you. . .

Turtle is a public domain program which dates back to 1987 and has had very few changes since. It is supplied as a collection of programs, including TURTLE.PRG itself, several RAM disk programs and a TTP program. There is also a large README file with all the necessary instructions.

NOVELTY VALUE

Turtle works in a rather novel way. It creates a RAM disk with exactly the same characteristics as a normal floppy disk and copies files from the hard disk into the RAM disk. When the RAM disk is full, it writes the contents to a floppy disk as a track-by-track image rather than as individual files.

The documentation states that all accessories have to be disabled as the program needs every available kilobyte of RAM.

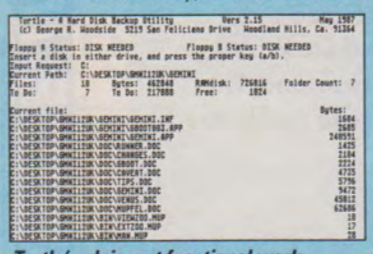
This puzzled me at first, especially as my first backup was quite successful depite having my usual clutter of patches and accessories installed.

Why should a floppy disk size RAM disk need so much space? When the program was first developed, virtually all STs were 520s — with today's 1,2 and 4 MB machines you can safely forget these instructions.

SPEED ISN'T EVERYTHING

This method is fast but all the floppy disks have to be formatted in the same way, which can be inconvenient, and there are far fewer options for the backup path. In short, you can back up a whole partition or a single folder but not a combination of one or more of each.

Turtle is a fast, efficient backup program (our test run took 320 seconds and used 4.2 disks) but its lack of flexibility makes it highly unsuitable for a careful backup strategy.



Turtle's plain, yet functional work screen shows you everything that's going on.

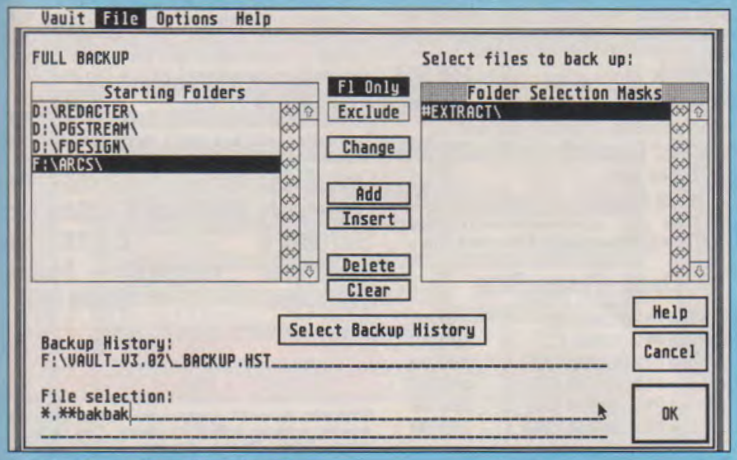
"Highly unsuitable for a careful backup strategy"

NAME: TURTLE
COMPANY: PD
CONTACT: ANY PD LIBRARY
PRICE: FREE

FEATURES:	★★☆☆☆
EASE OF USE:	★★★☆☆
PERFORMANCE:	★★★★☆
VALUE FOR MONEY	★★★★★

OVERALL 71%

THE VAULT V.302



The Vault's semi-graphical interface.

Reliable if a little slow, this program only costs the price of a disk. . .

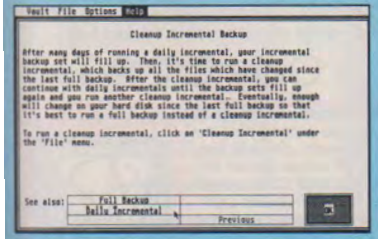
The Vault version 3.02 is a PD backup program with a very professional-looking GEM interface and a range of configurable options. The menus are simple and uncluttered with most of the options selected from the resulting dialogues. It has plenty of integrated features although restoring files back on to a hard drive is done using a second program, The Key. In fact, as the files are not compressed on backup, they can be restored individually as well.

The Vault includes source code and two large text files with instructions on use. They are in TEX format but can be read in any text editor. There is also a comprehensive online help facility.

Options include full or incremental backup, splitting large files onto separate disks, formatting disks during the process, straightforward but intelligent file copying and online help. Full backup is just what it says - the program is directed to copy every file in the path or paths specified by the user. Incremental backup is usually carried out after a full backup. Any files which have changed since the full backup will be backed up again and any new files which have appeared in the specified backup paths will also be included. This is a very powerful option as incremental backups are quick and easy, with the program doing all the work in remembering which file was backed up when.

The incremental backups can be controlled either by system date and time (the time shown by the ST's internal clock) or by using the archive bit, a feature of TOS 1.4 and later systems. Basically each file has an archive bit which is set whenever a file is changed.

The file copying option makes use of the intelligent packing algorithms that ensure that disks are used as best they can, although I'm not sure who would want to load a backup program just to copy files. If disks need formatting while the backup is underway, ***The Vault*** will format them to 80, 81, 82 or 83 tracks with nine or 10 sectors, skewed or unskewed. All in all, ***The Vault*** is a slow but flexible backup utility with everything that the average hard disk owner needs.



The Vault features extensive online help.

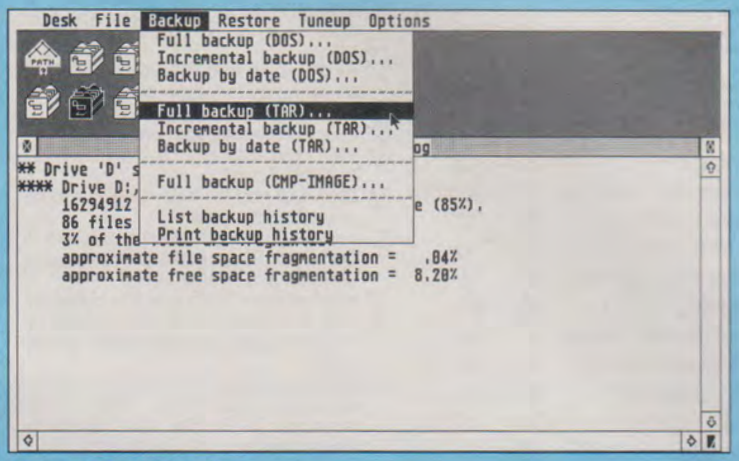
"Slow but flexible, with everything that the hard disk owner should need"

NAME: THE VAULT
COMPANY: PD
CONTACT: ANY PD LIBRARY
PRICE: FREE

FEATURES:
EASE OF USE:
PERFORMANCE:
VALUE FOR MONEY

OVERALL 80%

MICHTRON TOOLKIT



Michtron's Toolkit in action.

This program has a bonus – it'll organise your files for you. . .

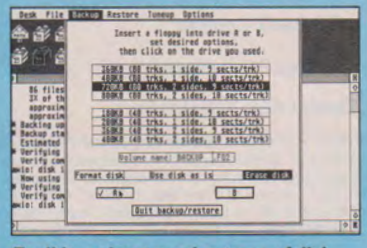
This is another ageing piece of ST software but it has its good points, including an adequate if slim manual. The backup utility is one part of a toolkit program that offers drive information, statistics and optimisation as well.

When files are repeatedly copied and deleted on a disk or partition, many of them become fragmented, and read/write operations slow down considerably. Optimisation is the reverse process of re-ordering files on a disk or partition so that they are all placed in consecutive sectors. It has been sadly overlooked on the ST, in much the same way as hard drive backup, but the optimisation facility in the Michtron Toolkit seems to work well enough.

In the absence of decent optimisation programs, many hard drive owners simply back up their drives and then restore them again. An alternative method is to back up one partition, delete it and then copy the others around one by one, ending up by restoring the backed-up partition.

The Michtron backup routines include full and incremental backups and offer three types of disk format. The DOS type backups can be read as normal which makes it easier to subsequently retrieve individual files. TAR format backups, on the other hand, are image backups and can't be read by GEM. They are, however, slightly faster. The third type is CMP-IMAGE, an image backup but it doesn't seem any faster than TAR.

The DOS backup was particularly slow, taking 745 seconds to backup the test data onto 3.8 disks. The TAR format was much quicker (295 seconds for four disks) but this is the least flexible, and while the type of disk can be selected each time a new one is entered, it is easy to write over an already backed up disk. The optimisation facility is a useful bonus and there is a good disk cache program on the same disk.



Toolkit - at least varying types of disk format can be used.

"Choice of image, GEM compatible or proprietary format"

NAME: MICHTRON TOOLKIT
COMPANY: LADBROKE COMPUTING
CONTACT: 0772 203166
PRICE: £14.99

FEATURES:
EASE OF USE:
PERFORMANCE:
VALUE FOR MONEY

OVERALL 77%

Data Pulse Plus

ST Repairs

Our Service department can repair ST's in minimum time at competetive rates. We can arrange for courier pickup and return delivery of your machine to ensure it's safety. We even have a same day service which will ensure your machine is given priority and subject to fault, completed the same day. We can fit memory upgrades, PC Emulators, Security devices, ROM upgrades, hard drives to Mega STE's etc.
We offer a Quotation service for £15 for which we will examine your machine and report back with an exact price for repair. If you do not wish to go ahead with the repairs then just pay the £15. However if you do go ahead then the charge is included in the minimum charge. Please note: The minimum charge covers labour, parts are extra.

Quotation	£	15
Min repair charge	£	35.25
Courier Pickup	£	10
Courier return	£	6
Same day service	£	15
STFM(E) PSU	£	45
1Mb Internal drive	£	45
A/B Boot switch	£	14.99
TOS Switch	£	10
52Mb Quantum Hard drive upgrade for Mega 1 STE	£	299.99
105Mb Quantum Hard drive upgrade for Mega 1 STE	£	399.99

ST Secure

ST Secure is a hardware protection system for the Atari ST which stops unauthorised use of your computer and any hardware connected to it. ST Secure measures just 1 inch square and can be installed without soldering in about 30 minutes. Once installed ST Secure will allow approximately 45 seconds of computer use before resetting the computer. If during this time the password is entered correctly then ST Secure is disabled until the next power up.

Now Only £19.99

ST Hard drives

The Data-Pulse range has recently been re-designed. The Data-Pulse Plus range now offers a more compact case that cuts down on noise even more, all ports are marked, an extensive range of software utilities are now included and our range of special offer utilities has been expanded confirming our commitment to future support.

- ☑ All drives are formatted/partitioned and tested ready to "plug in and go".
- ☑ Extremely low noise.
- ☑ Fully Autobooting and Autoparking.
- ☑ DMA device selector & On/Off switch on front of case.
- ☑ DMA Out port for daisy chaining extra drives/Laser printer.
- ☑ Full metal case measuring 300mm x 285mm x 51mm (wdh), providing good shielding, and monitor stand.
- ☑ High quality ICD boards and controller software, choice of ICD board with or without battery backed clock (prices differ).
- ☑ All drives include Vault archiver, Backup software, Virus killer, MCP shell program, Midistudio & Midistudio Master demo's.

Due to Bulk purchasing power we can offer the following special offer deals to all existing and future Data-Pulse/Data-Pulse Plus hard drive owners.

Neodesk 3	£	24.99
HD Turbokit	£	14.99

Hard disk Optimiser, de-fragments and backs up.

Diamond Back II	£	29.99

Excellent backup utility

DC Data Diet	£	49.99

A real time data compression/de-compression system to increase the capacity of your hard drive.

Data-Pulse Plus

Data-Pulse Plus 52Mb GE	£	339.99
Data-Pulse Plus 52Mb ICD	£	359.99
Data-Pulse Plus 105Mb GE	£	439.99
Data-Pulse Plus 105Mb ICD	£	459.99
Data-Pulse Plus 120Mb ICD	£	529.99
Data-Pulse Plus 240Mb ICD	£	799.99

The Data-Pulse Plus 120 and 240 incorperate the new Quantum mechanisms which feature 256K Read & Write disk cache, faster access time and improved reliability. All Data-Pulse Plus drives include Quantum mechanisms which include 2 year warranty from date of manufacture.

Data-Net

Data- Net is a high speed network solution for the ST/TT. Ladbroke's Data- Net hardware can transfer data at up to 10 Megabits per second. Connection is via the cartridge port of the ST and nodes are connected via Coaxial cable. The Multi tasking network software allows the sharing of Hard drives and Centronics printers anywhere on the Network. Nodes can also Auto boot accessories from a host's hard drive.

Data-Net starter	£	399.99

The starter pack includes 2 nodes and Universal Network software.

Data-Net node	£	199.99
Universal Network Starter Software	£	219.99
Universal Network Node software	£	99.99

Silhouette

Silhouette is a bit image and vector graphics drawing program with Auto tracing. The package offers Auto- Tracing, Beziers, B-Splines, High resolution gray scales. Supports FSM-GDOS, requires 1Mb ST or TT High resolution. Imports: IMG, DEGAS, TINY, MacPaint, GEM, SGF. Exports: IMG, GEM(1.3), SGF, DXF, EPS(Postscript).

Only £60

Aries Upgrades

The Aries Upgrade board is an in house designed, Multi layer board utilising high density ZIPP RAM chips. The board has been designed to allow progressive upgrading from the base 512K up to 4Mb. The board does require some soldering but once installed is very reliable. The board is hand assembled in our workshops by skilled technicians and is fully tested before despatch. It also comes complete with fitting instructions and test software.

Our technicians can fit the board to any ST for a small fitting charge. We can arrange courier pickup and return to ensure fast turn araound. A same day fitting service is also available. Please phone for further details of courier and same day service.

Aries Upgrades (any ST(F)(M))

512K Aries board	£	39.99
2Mb Aries board	£	84.99*
4Mb Aries board	£	149.99*
Courier pickup	£	10
Courier return	£	6
Fitting charge	£	15
Same day charge	£	15
16/4 chip upgrade STFM	£	24.99

Please check the configuration of your machine before ordering. These chips are not surface mount.

**=special offer*

Aries SIMM's

Special Offers

512K SIMM Upgrade for STE

£13.99

2Mb SIMM Upgrade for STE

£59.99

4Mb SIMM Upgrade STE

£114.99

Please check configuration before ordering

1040STE PRO 24 pack £319
520STE Discovery Xtra pack £239
1Mb Discovery Xtra pack £249
Phone for printers, monitors etc.

The NEW Brush Mouse

- ☑ *150 Dpi resolution*
- ☑ *500mm/SEC Tracking speed*
- ☑ *Switchable between ST/Amiga*
- ☑ *Opto/Mechanical Mechanism*
- ☑ *Includes Deluxe Paint ST*
- ☑ *Direct mouse replacement*

£24.99 *with D-Paint* **£19.99** *without D-Paint*

GI Hand Scanner £119.99

The Golden Image Hand Scanner for the Atari ST features a 105mm scanning head, variable contrast control, user selectable scanning resolutions of 100, 200, 300 and 400 Dpi, one letter mode for high contrast B/W images and 3 photo modes for various shades of grey. The high quality hardware is backed up by two of the most respected graphics packages around. Migraph's Touch Up for scanning and editing hi-res and grey scale images and Deluxe Paint art package for lower resolution colour.

- ☑ 100, 200, 300, 400 Dpi scanning resolution
- ☑ 105mm scanning head
- ☑ 1 letter mode, 3 photo modes
- ☑ Includes Touch Up
- ☑ Includes Deluxe Paint

Coming soon: **Silhouette**, *Auto tracing/line art package which converts bit images to Vector images at the incredible price of* **£80**.

GI Optical Mouse £29.99

The Official Golden Image Optical Mouse is a high quality, 3 button, replacement mouse. The fully optical mechanism means no moving parts and offers far higher reliability than opto/mechanical mice.

- ☑ 250Dpi, 500mm/sec tracking speed
- ☑ Fully Optical
- ☑ Mouse mat included
- ☑ Switchable ST/Amiga

GI External drive £59.99

The Golden Image External 3.5" Floppy drive for the Atari ST features 720K formatted capacity, double sided double density, LED track counter, Through port compatibility for older ST/STM machines, external PSU.

- ☑ 720K Formatted capacity
- ☑ LED Track Counter
- ☑ External Power Supply
- ☑ Daisy Chain Through Port

GI Mouse

The Golden Image Opto/Mechanical Mouse offers 290 Dpi resolution, 2 Microswitched buttons for greater reliability and crisper, more positive response, Anti-static silicone rubber coated ball. Also includes mouse mat.

Only £14.99

Jin Mouse

Don't be deceived by the low price of this mouse. Mass production of the Jin mouse has resulted in a high quality Opto/Mechanical mouse featuring 290 Dpi resolution, 500mm/sec tracking speed, Anti-static silicone rubber coated ball.

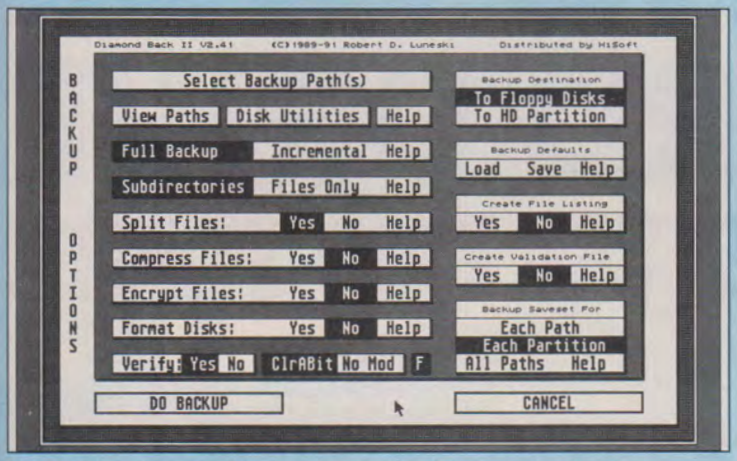
Only £12.98

Ladbroke Computing International

Ladbroke Computing International are the longest established Atari dealer in the U.K. We have developed an extensive customer service policy which involves testing of all Hardware prior to despatch to ensure that goods arrive in working order, offering free advice and support over the phone and keeping customers informed. Although our prices are not always the cheapest we do endeavour to offer consistently good service and backup. All prices correct at copy date 15/06/92 (while stocks last), and are subject to change without prior notice. All prices include VAT but exclude delivery. Add £5 for next working day courier delivery, add £10 for Saturday courier delivery (mainland U.K only). Add £3 for postal delivery, only on items under £50 (check with staff before ordering). All prices available on Mail Order, Shop prices may differ. Shop/Mail order premises: 33 Ormskirk Road, Preston, Lancs, PR1 2QP. Open Mon-Sat 9:30am-5:00pm. Phones answered from 9:00am. Ladbroke Computing International is a trading name of Ladbroke Computing Ltd. BFPO addresses overseas, deduct 17.5% VAT and add normal U.K carriage.

Telephone (0772) 203166 FAX (0772) 561071

DIAMOND BACK II



Diamonds help keep your data for ever as well as being your best friend.

If you're looking for an effective backup program then this could be the one for you. . .

Diamond Back II is the latest version of another backup utility that's been around for a while. It's now a full commercial release distributed with a very good manual.

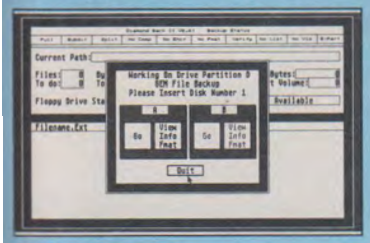
Diamond Back has a very comprehensive list of features indeed, including full and incremental backup, flexible file masks, optional data compression, Mac/Spectre partitions, support for high density disks and the ability to save custom backup configurations. The interface is fully mouse controlled and although a little cumbersome at first, it soon becomes second nature.

Diamond Back can back up to floppy disks or other partitions with lightning speed. Even if data compression is chosen, the files are still individually accessible to GEM despite being compressed. However, only ***Diamond Back*** will be able to decompress them and restore them.

File masks are easy to set up. Essentially, masks let you specify which files in a particular folder you want backing up and which you don't. For example, you may not want to back up any files with a .BAK extension.

The program also has its own fast floppy disk format known as Diamond Super faST which claims to be faster than any other disk format. In our tests, it scored pretty highly, carrying out a GEM compatible backup in 335 seconds on to 4.1 disks and an image backup in 290 seconds using 4 disks. The fastest backup time we could achieve (but still with verification) was 219 seconds on to 2.1 disks, using full compression and Super faST format. Power users be warned though – it's still not as fast as the PC programs by Norton or Central Point. ***Diamond Back*** contains other useful functions such as file finding and viewing text files. Data can be encrypted as well as compressed but this slows things down.

The ability to save configurations means that on subsequent backups you can recall the list of paths and use the same mask to repeat the backup. The folders and disk structure are bound to have changed – rely on this and you'll get complacent and forget about that all-important new folder you created last week!



Backup in progress.

"More features than I'll ever need"

NAME: DIAMOND BACK II
COMPANY: LADBROKE COMPUTING
CONTACT: 0772 203166
PRICE: £29.99

FEATURES:	✪✪✪✪✪
EASE OF USE:	✪✪✪✪✪
PERFORMANCE:	✪✪✪✪✪
VALUE FOR MONEY	✪✪✪✪✪

OVERALL **86%**

SETTING UP A HARD DRIVE

Most hard drives are divided into smaller, logical units known as partitions. Everyone has their own preference for the way in which they set up a hard drive. By and large, it makes little difference whether you use a single big partition or lots of small ones. How you want to work is much more important.

There are some restrictions, however. Early versions of TOS such as 1.0 and 1.2 can only handle partitions up to 16 MB. TOS 1.4 can handle 32 MB partitions but some controllers and drivers such as the ICD one can actually fool TOS and manage partitions up to 512 MB. These are known as BGM (Big Gem) partitions. Whether the backup programs would accept this "fiddling" with the operating system limit is something I couldn't test.

The size of your partitions and the type of backups you do are closely related. Large partitions are awkward to back up if using image backup techniques. There is also a danger that with several levels of nested folders in a large partition, the operating system will give up and crash. If not it could still cause problems for some programs.

There are various strategies for making backup easier. I divide my own disks into five partitions, four large and one small. The last and smallest is used just like a permanent RAM disk - a temporary storage area. All my data files, from every program I use, are written to one partition. By keeping plenty of free space on the boot partition, all the drives can be swapped around and rewritten to optimise efficiency, and when incremental backups are required, there's only one partition to look at.

You can partition a hard drive with up to 14 slots and organise your files appropriately.

CONCLUSION

There is no doubt in my mind about which is the best backup utility. I already use Diamond Back as my own safety net and having reviewed the opposition, that situation is unlikely to change.

Your choice will depend on your backup strategy. Speed is important because if a program is too slow, quite simply you'll soon find excuses for not using it. Ease of use and flexibility are also vital - without them, the program will simply get ignored until one day the dreaded crash occurs.

If you have a smallish hard disk, it's perfectly feasible to use something like Turtle to rapidly back up the whole disk every so often. More sophisticated users will want to look at those utilities capable of partial and incremental backups. The Vault might be a little slow in use and need more disks, but it is safe and you're unlikely to miss anything.

Michtron's Toolkit is just too slow for the all-important GEM compatible backups needed for everyday use, although the proprietary TAR format is fairly nifty. Diamond Back scores on every front - it has speed, it has flexibility and it has more options than any of the others put together. If your hard disk means anything to you at all, Diamond Back II must be high on your shopping list.

BUILDING YOUR OWN HARD DRIVE IN SEVEN EASY STAGES

ADD ONS

Can't afford £300 plus for a hard disk drive? Tony Kaye shows you how to assemble one for much less

Fancy a hard disk drive but can't afford it? There is a cheaper way of getting into the fast lane. It involves a little bit of time and effort, but the rewards are high, as you will find out as soon as you connect it to your ST.

On page 34 you'll see the start of our review of all the major hard drives on the market. They all have the same basic components – case, power supply, host adaptor, bare SCSI drive and leads. Some have the addition of a fan to keep the temperature down while others have opted to sacrifice a little heat for a quieter operation.

To build a drive, you need to obtain each of these components. Most are available in the form of a kit, which is what we have used for our guide. The kit has a power supply, host adapter and leads, so all we needed to find was a bare SCSI drive. A look around the computer auctions proved to be rewarding and we managed to find a 90 Megabyte drive for just £30. The kit cost £139, so the total was £169, which is a substantial saving compared with the cost of a completed drive. Watch out for more information on buying from auctions in the future.

Pictured above: the £139 kit that we used to assemble our hard drive.

SOME TERMS EXPLAINED

You may be getting confused by some of the terms used here, so a few are explained below

SCSI stands for Small Computer Systems Interface (see page 37 for more on this). This is important as a non-SCSI drive will not work with the system.

SOAK TEST

The drive was put on a long-term loop-test to show up any signs of it going wrong after it was built. It is important to do this before you use the drive for any valuable data that you don't want to lose. The test is provided on the manager disk with the kit.

PARTITION

The drive has to be broken up into chunks that the computer can handle. An STFM can only handle up to 16 megabytes of data, so the partitions on the drive make the ST believe that there are several drives connected of 16 Megabytes or less.

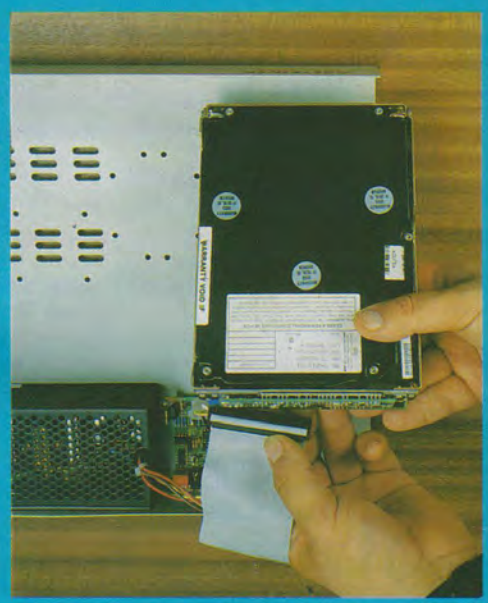
FORMAT

This is the same as for a floppy, but on a larger scale. The same basic rules apply, though.

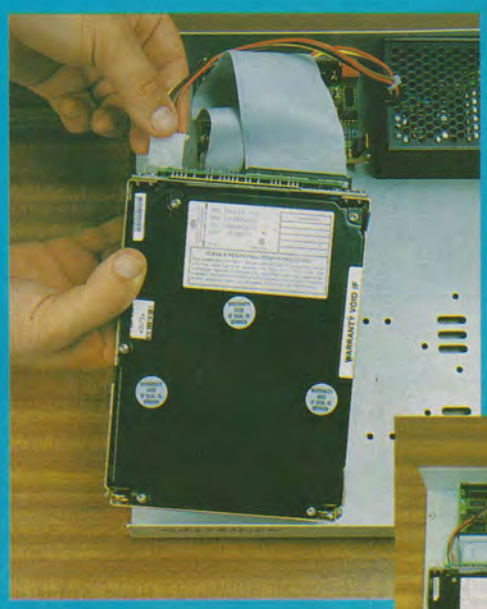
BOOT DRIVE

When the ST is switched on, the drive that it first accesses and draws information from is called the boot drive. For a non-hard disk system, this is usually drive A, but with an auto-booting hard drive, this normally becomes drive C.

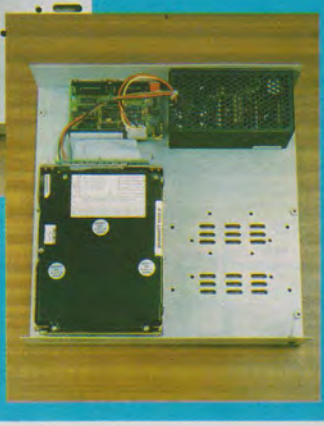
STEP BY STEP



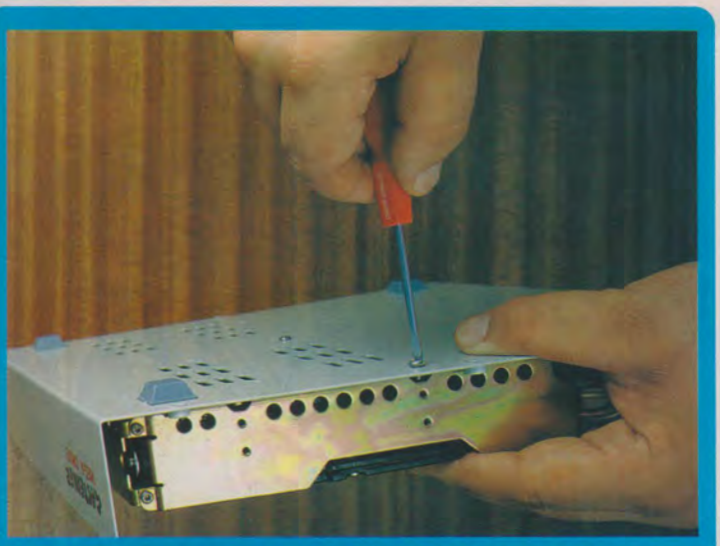
1 ***Once the case is opened, plug the 50-way SCSI lead in to the back of the drive. This normally has a notch to ensure that it's the right way round. Make sure that the plug is square and then push it on firmly.***



2 ***Next plug the power lead in. This will only go on one way round. The lead is equipped with five volts and 12 volts and whatever drive you use will be wired to take only the particular lead that it requires.***



3 ***Place the drive in position on the base. There is room to add a second drive later on. If you can handle a soldering iron, snip off the LED on the front of the drive itself and run a lead to the LED mounted on the fascia.***



4 *Using short screws, fix the drive to the bottom of the case. Do not use screws that are too long, as they could catch on the drive and damage it.*

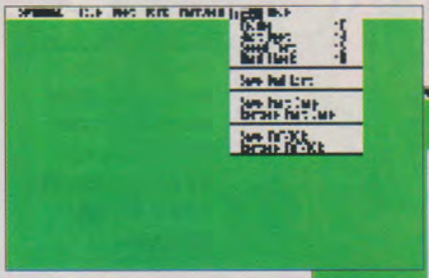
5 *Slide the top of the case on, being careful not to trap any of the leads between the two parts of the case.*

6 *Now turn the unit over and screw the case together using the six screws provided.*

7 *The finished drive. Looks as good as anything you can buy, don't you think? And you've saved quite a lot of cash, too.*

Configuring the driver and installing the boot drive.

After running the drive for at least half an hour, format and partition it.



Options for checking the speed and the drive.

Last chance to quit before doing a full format!

FORMATTING YOUR NEW DRIVE

Before filling the drive with valuable data, it is important to run some tests and checks on it. This will save you endless problems later on.

The first thing to do when the drive is connected is switch it on and leave it running for AT LEAST half an hour. This will allow it to get to a proper operating speed and temperature. Then you will have to format it.

Switch on with the disk provided with the kit in drive A. Find the manager program and run it. The manager program with the Gasteiner kit is called ***SDMANAGE.PRG***.

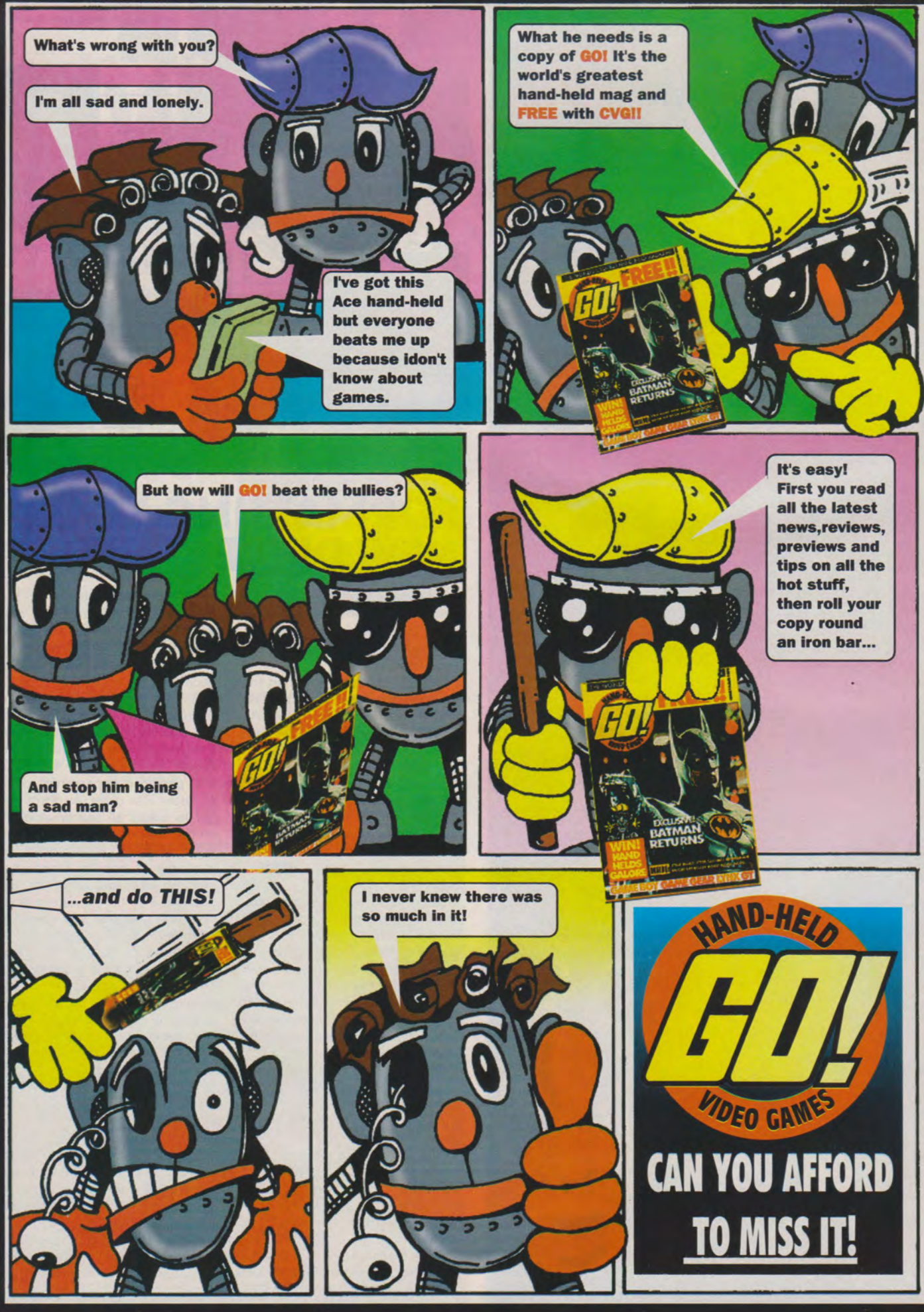
The menu bar presents you with several options. Under the heading Disk you'll find an option to format. Clicking on this will cause the computer to read the Wincap file, which provides the identification information of the drive. Follow the on-screen instructions and the drive will be formatted.

The next step is to set up the drive partitions. Remember that an STFM can only read partitions up to 16 megabytes, and the STE, up to 32, so it will be necessary to create several partitions on the drive (we would suggest that 16 Megabytes is the maximum you really need, then you are covered both ways). Each partition will have the physical appearance of a separate disk drive, so don't forget to install all the drive icons on the desktop. Once the drive is partitioned, you now need to do a couple of checks. Under the heading Util you will find two options. The first is Speed test. This will give you the speed of your drive, and is ideal to put on the loop-test setting to make sure that it's working properly. The second option that we would advise you to use fairly quickly is the Hard check. This will reveal any serious problems with the drive itself.

FORTY FOLDERS?

ST TOS limits the number of folders that you can open in any single work session to 40. After this, the system starts doing weird and wonderful things like corruption of displays in windows and incorrect directories. Fortunately there is a cure. The manager program supplied with the kit has a fix included in it. If you need more, then a small PD program called ***FOLDERxxx.PRG*** will also solve the problem. This is placed in your AUTO folder on drive C (or whichever is your boot drive) and then it will do the rest. You will not be bothered by it any more, except for a message at bootup, telling you that it has installed itself and how many extra folders you have to work with.

GOT A HAND-HELD?..THEN GO! AND GET THIS!



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MICE ON THE MENU

The time when you had to persevere with the mouse served up by Atari is long gone. But are all mice equal? Probably not, if our selective round-up is anything to go by

The original mouse from Atari was quite an eye-opener for computer users who were accustomed to solely using a keyboard. However, the left-hand switch packed up pretty quickly and the cable grip couldn't prevent the internal wires from fracturing, which resulted in intermittent faults.

The first replacement mice from Naksha were relatively expensive in comparison, but their feel was glorious due to the high resolution.

HOW DOES A MOUSE WORK?

Inside there are two narrow rollers set at right angles to each other which press against a rubber ball. A spring-loaded roller is positioned at the opposite corner of the ball – this maintains the pressure against the other two rollers which are attached to spindles. At the ends of these are two tiny wheels with regularly placed slits cut through them. As the rollers rotate, so do the wheels.

TRANSMITTERS

Behind the wheels are two tiny infra-red transmitters which shoot beams of light at the wheel as it turns. In front of the wheel is a small plastic plate which has a pin-prick hole in it; this functions like the lens of a camera, and focuses any infra-red light on a specific point. Where the light focuses, there's an optical receiver that has two states, on and off. When light hits the receiver, it changes its resistance to electricity and the mouse circuitry interprets this as movement.

If the mouse is moved other than vertically or horizontally, both rollers will move, but one will usually turn at a different rate to the other. The mouse controller chip can identify which direction you're moving in and how fast. The mouse buttons send out a signal when they're pressed (switched on).

ALFA DATA INFRARED MOUSE

GASTEINER ● £44.95 ● 081 365 1151

IN BRIEF: One of the most annoying things about using a mouse is that its cable keeps getting tangled up. It's also the cable that's usually the first part to break. The infrared mouse transmits your movements to a receiver in exactly the same way as a TV remote control does, negating the need for any wires at all.

First impressions of this mouse were disappointing: it seemed to cause the screen cursor to act as if it were on a rubber band and had been accelerated with a program such as Maccel.

This was caused by the slight delay between my movements and the on-screen cursor's reaction. After a short while, I realised that if the mouse is moved a little more slowly, it behaves exactly the same as any other mouse.

In styling, the mouse is very similar to many of the other Naksha-based mice. It sits comfortably in the hand, but doesn't represent state of the art as far as ergonomics are concerned. It claims a transmission angle of 45°, with a receiver angle of 70°. My own findings contradicted this because, providing the mouse was within the receiver's five-foot range, and in sight of it, I found that there was no angle at which it wouldn't work.

At high speeds, the mouse becomes a little unpredictable, but its 260 dpi resolution is more than adequate for "normal" requirements. The receiver also doubles as a recharger for the mouse, so whenever you replace the mouse on its stand, it gets a quick top-up.

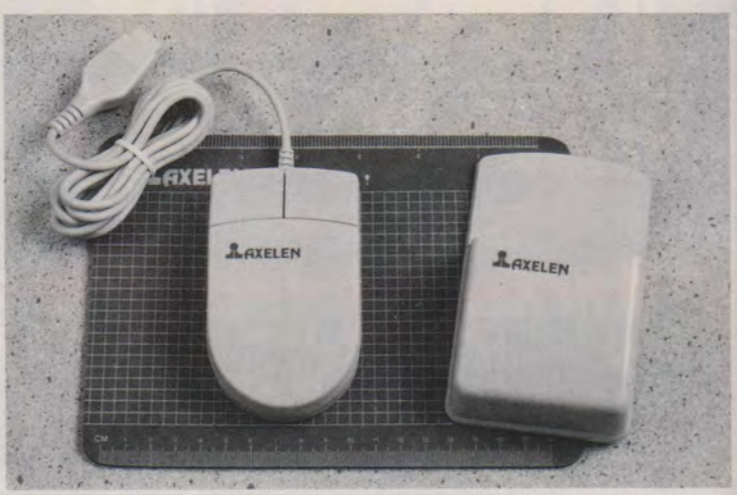
ST REVIEW COMMENT: "Freedom at a price; expensive and a little unpredictable at high movement speeds."

✪✪✪✪

KIDZ MOUSE

LOGITECH ● £32 ● 0344 891313

IN BRIEF: The Kidz Mouse looks like one of those novelty items which are born as the result of a drunken conversation, but never



The Axelen mouse – one of the cheapest on the market.

really serve any useful purpose. Why this scepticism? Well, it's the shape of the thing: it's been designed to look like a real mouse – complete with snout, tail, and even little eyes!

As you can tell by the name, this particular mouse has been designed especially for kids, and is safe for any child of three years and over.

It has a dinky little shell which will fit snugly into small hands. In addition, where a real mouse's ears would be, this little beastie has two bright blue buttons.

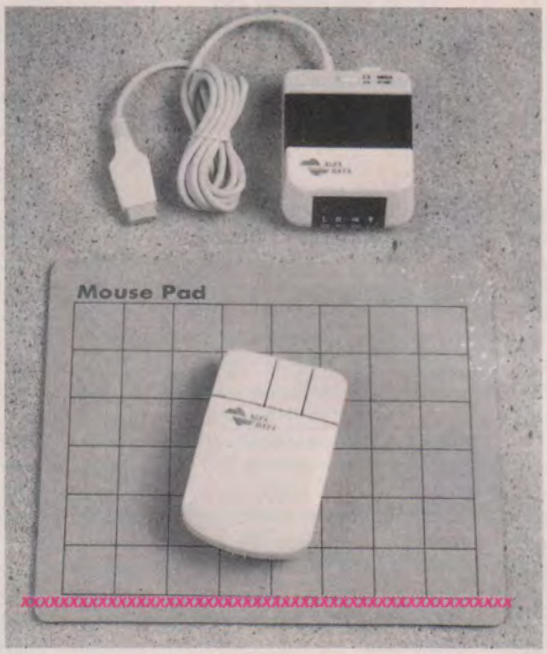
The ball is smaller than usual, and the ball cover is Philips-screwed into place to prevent inquisitive little hands from getting to the ball, and perhaps choking on it. Uniquely, the cable extends from the rear of the mouse (beneath where your hand actually sits), but it's secured to the side of the mouse and guided towards its front.

At 200 DPI, it has quite a low resolution, but this is belied by the unit's responsiveness. As the Kidz Mouse is too small for adult hands to hold in the traditional way, I found myself adopting a more arched hand position, almost as though I were doing press-ups with my fingers – weird as it may sound, though, after a brief period of familiarisation, I found this unusual position quite comfortable. More importantly, I felt that I had far greater precision in this position than in my more common hand position.

In all honesty, it's with surprise that I can report the Kidz Mouse to be a great success for both kids and adults alike. It's light, yet well-made, looks cute and feels very positive – everything a mouse user will appreciate, in fact. It's just a pity it's so expensive.

ST REVIEW COMMENT: "Cute, catchy and fun to use but a little expensive."

✪✪✪✪



AXELEN MOUSE

GASTEINER ● £15.95 ● 081 365 1151

IN BRIEF: If this mouse were a car, it would be a Ford Sierra. It has no sporty curves or flashy racing trim, and it's not the fastest nor the most expensive model available. It's just good, solid, reliable engineering, with a little touch of style

The Axelen is a switchable mouse which can toggle between Amiga and Atari machines. Although made of plastic, it's quite heavy, and I suspect that this may make it a little susceptible to damage if dropped too many times. The buttons give a nice definite click and are perfect in terms of responsiveness. Although it doesn't have the almost organic shape of mice such as the Logimouse, it fits very comfortably into the palm. At 300 DPI, it has a high resolution, and this is reflected in smooth and positive control when using art packages.

The package comes complete with a mouse house and mat, and represents good value for money.

ST REVIEW COMMENT: "One of the cheapest mice on the market – solid and reliable."

✪✪✪✪

ITSA MOUSE

FIRECREST ● £12.95 ● 0291 690933

IN BRIEF: Returning to our earlier car analogy, this mouse would definitely be a Skoda or a Lada. It works fine, but there's no style value whatsoever. Although it doesn't look as if it's undergone much ergonomic styling, it feels substantial, and its shiny plastic shell is very appealing.

SMOOTH FEEL

Screen movement is smooth, although not as responsive as it could be. The buttons have a positive feel to them, and although the mouse doesn't seem as though it's been constructed to last until the year 2000, it's not likely to fall apart in your hands .

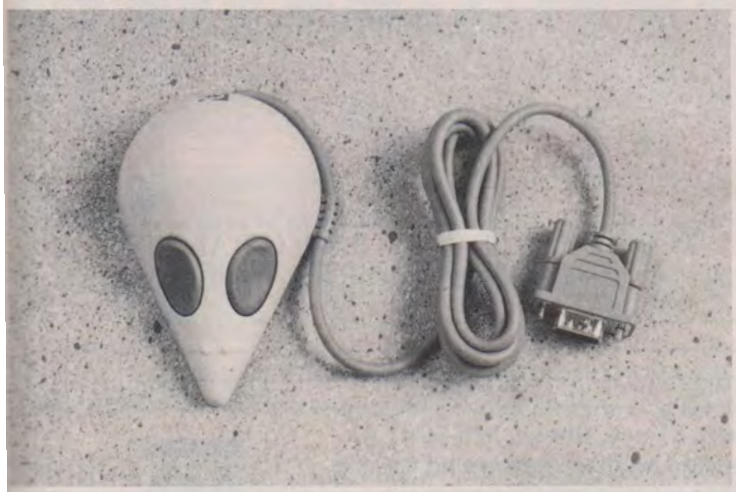
ST REVIEW COMMENT: "Well constructed but lacking in style."

✪✪✪

LOGIMOUSE PILOT

LOGITECH ● £27 ● 0344 891313

IN BRIEF: Initially, the most outstanding thing about the Pilot is its high price. Can it justify such a price tag? Well, in some ways, the answer is yes. For example, it's the most stylish, and features the best construction of all the mice in our round-up. It also comes with a two-year guarantee. The unit is shaped like a quarter circle, giving it a very hi-tech look. The low-



Kidz Mouse – designed specifically for children and safe for kids over the age of three.

Itsa Mouse – this one works fine, but it loses marks for style.

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VISA

slung back is problematic: it's not exactly uncomfortable, but it feels quite different to what most people will be used to.

At 200 dpi, the mouse has a lowish resolution, but, as with its cousin the Kidz Mouse, the Pilot has a very smooth feel to it. Its feet are a slight weak point: they're not as slick as they could be and it requires a little more effort to actually move the device across the surface of a mat.

WELL MADE

The Pilot looks and feels well made. From its precisely fitted buttons, down to its perfectly fitting bottom shell, there doesn't seem to have been a single corner cut anywhere.

It will take a little bit of getting used to, but when you're comfortable with it, the Pilot is likely to serve you faithfully for a long time to come.

ST REVIEW COMMENT: "This mouse is certainly smooth to use, but the resolution could do with being a bit lighter."

✪✪✪✪

THE BRUSH

GASTEINER ● £29.95 ● 081 365 1151

IN BRIEF: In the quest to find new input devices, we've seen the light pen and the graphics tablet, and now Gasteiner brings us The Brush, a hybrid of the two. This is basically a mouse stuck on the end of a pen, with the two buttons mounted on its upper side near the stem.

I had high hopes for this, but unfortunately none of them have been realised, which is a pity because the basic idea is very sound. There are three main problems, which between them, detract from the unit's usefulness. First, its resolution: at 150 dpi it's the lowest resolution of any device tested, and this tends to make smooth control very difficult – try as I might, I just could not draw a smooth circle in Degas Elite using it. Instead, everything ended up looking like a square with slightly curved corners.

The second problem is the positioning of the buttons. The left button is the lower of the two, and is moderately comfortable to use, but because the right button is higher, this proves quite uncomfortable.

The problem would be alleviated if the left button were halved in size, and the right button moved down by a centimetre.

The final problem is in the action of the small plastic ball used to register the user's movements. It's housed in a square casing about two centimetres on each side. This casing is only fractionally higher than the level of the ball which means that you have to keep the pen virtually vertical all the time it's in use. Some kind of ball pen-type arrangement would have worked better.

In the unit's favour, it requires a very small working space, and as long as you're not drawing or using the right button extensively, it feels comfortable. It's also cheap – but these points hardly make it an essential purchase.

ST REVIEW COMMENT: "Interesting idea but let down by poor design."

✪✪✪

OPTICAL MOUSE

GASTEINER ● £34.95 ● 081 365 1151

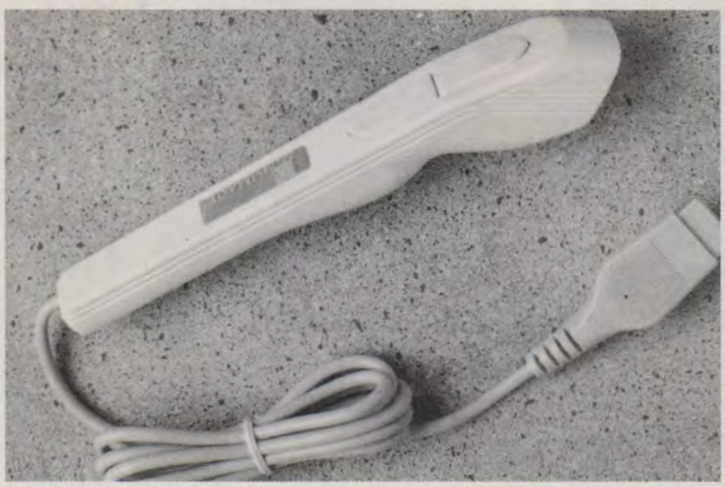
IN BRIEF: Optical mice require a special mat to work properly and the Alfa Data mouse uses a mat which is attached to a rigid backing for maximum control. The mouse has an impressive resolution of 300 dpi, but this can't compensate for the inability of optical mice to draw smooth diagonalsat slower speeds.

The mouse is pleasantly styled, and both buttons have finger-locating ridges so that it can be used without looking at it. The best thing about this mouse, though, is that it never needs cleaning, and it doesn't have a ball which can get stuck.

ST REVIEW COMMENT: "Difficult to draw smooth lines but a luxury mouse nevertheless."

✪✪✪✪

The Logimouse Pilot – no corners cut on this one!



Gasteiner's Brush: another advance in the quest for new shapes.

BUYERS GUIDE

Our at-a-glance buyers guide shows how the mice compare

	Comp	Price	DPI	Res	Feel	Dur	VFM	Inn	Overall
Axelen	Gasteiner	£15.95	300	✪✪✪✪	✪✪✪	✪✪	✪✪✪✪	✪✪	✪✪✪✪
Alfa Data infra red	Gasteiner	£44.95	260	✪✪✪✪	✪✪✪✪	✪✪✪	✪✪✪	✪✪✪✪✪	✪✪✪✪
Kidz	Logitech	£32.00	200	✪✪✪✪✪	✪✪✪✪	✪✪✪✪✪	✪✪	✪✪✪✪	✪✪✪✪
Its a	Firecrest	£12.95	-	✪✪✪	✪✪✪	✪✪✪	✪✪✪✪	✪✪	✪✪✪
Logimouse Pilot	Logitech	£27.00	200	✪✪✪✪✪	✪✪✪✪	✪✪✪✪✪	✪✪✪	✪✪✪	✪✪✪✪
The Brush	Gasteiner	£29.95	150	✪✪	✪✪	✪✪	✪✪✪	✪✪✪✪✪	✪✪✪
Cal	Gasteiner	£34.95	300	✪✪✪✪	✪✪✪✪	✪✪✪	✪✪✪✪	✪✪✪✪✪	✪✪✪✪

KEY: Comp=Company, DPI=Dots per Inch, Res=Resolution, Dur=Durability, VFM=Value for Money, Inn=Innovation.

WATCH WHAT

To get the most out of your ST you need a monitor. Tony Kaye looks at what's available

If you use your ST with a television for any length of time, it can get tiring on the eyes. A television doesn't have the resolution needed to display a computer image, and the output from the computer has to be converted to RF so that the TV can pick it up. The answer to these problems is to get a monitor.

A monitor takes the signal directly from the ST. It has no tuner, so it's (thankfully) not capable of picking up East Enders. The computer sends out an RGB (Red, Green, Blue) signal; this is then converted to RF (Radio Frequency) which is what a normal TV can pick up.

SHARP AND CLEAN

By avoiding this conversion and using a higher resolution screen, a much sharper, cleaner image is possible. This is done by using the monitor socket on the back of the ST instead of an aerial cable.

There are three main types of monitor available:- colour, mono and multisync. The latter is quite specialised and expensive, and is not something that you are likely to choose for home use. We've included a television in our reviews for comparison reasons – and there's a large screen option for you DTP fans too!

ATARI SM144 MONO

HCS ● £115 ● 081 777 0751

Atari SM144, the latest incarnation mono monitor

IN BRIEF: The latest incarnation of the Atari mono monitors is the SM144. It is designed to fit over the Mega STE perfectly with its tilt and swivel stand. The screen is flatter than its predecessors, the SM124 and the SM125, which means that there is less reflection.The screen is slightly duller than the SM124, but this shouldn't be a problem in most environments. There's no need for a stereo output as this monitor is not designed to play games on – a single speaker is provided. The on/off switch is on the front, a useful feature if you are swapping between mono and colour.

This is the only way to make use of the high-resolution mode on the ST, so it's an essential piece of equipment for the serious user. The high resolution is needed for DTP applications where it is important to have the maximum amount of detail shown on-screen. Other uses include word processing, spreadsheets and just about any other business application. Programs like ***PCB Designer*** will not run in medium resolution, while most MIDI users would find life difficult without a mono monitor, as some MIDI programs will not even run in medium res.

The only drawback is the need to swap monitor leads and reboot the computer when changing to a lower resolution, but there are monitor switches available from various suppliers to save you having to swap plugs over.

ST REVIEW COMMENT: "Another essential add-on if you plan to use your ST for anything other than games playing."

✪✪✪✪✪

ATARI SC1435 COLOUR

SILICA SYSTEMS ● £249.95 ● 081 309 1111

The Atari SC1435: high build quality and a design to match your ST.

IN BRIEF: This colour monitor really stands apart from the crowd. It has a superior build quality and the added advantage of being coloured and badged to match your ST.

The components are Philips – in fact they are the same as the CM8833 II, but some of the redundant features, such as saturation, which is a video control and has no effect on RGB anyway, have been removed. All of the unused sockets have been removed too, thus leaving a good-looking, practical monitor.

SHARP COLOURS

Earlier Atari monitors had a characteristic dark and dull screen, but this is not evident on the SC1435. The colours are sharp and clear. Also causing the score to raise a couple of points is the tilt and swivel stand provided with the SC1435. This does not have to be used, but it's just one more thing that sets it apart from the rest.

The controls are situated along the front of the monitor at the bottom. The saturation control has been removed, but curiously, the green screen option is there. If it could be used in high resolution, it would make sense, but as it can't, it seems superfluous.

PLUSES AND MINUSES

The ability to move the image from side to side and centralise it on the screen is a bonus, but the decision to move the on/off switch to the back makes no sense at all.

ST REVIEW COMMENT: "This is a sleek-looking monitor with a range of features, and is worth some serious consideration."

✪✪✪✪✪

YOU WATCH

PHILIPS CM8833 MK II COLOUR

PHILIPS ● £229.95 ● 081 689 4444

IN BRIEF: The original CM8833 mark 1 was on its own in the field, being cheaper and better than the early Atari colour monitor. The image is excellent, but the monitor is let down by the lack of a tilt and swivel stand, a curved face and shiny screen causing reflections, and the odd angle at which it is set.

Drop down the flip panel at the front to reveal the volume control, a green screen option, and controls for saturation, contrast, brightness and a horizontal control to move the whole image left and right. As this is designed to run with various machines, the saturation control makes no noticeable difference.

Sound quality is good, with the addition of stereo sound. There are phono inputs for the sound source, and a simple phono lead from your local electrical store, which costs around £1.99 will have you linked up.

ST REVIEW COMMENT: "This monitor is the grandaddy of them all – an adequate all-rounder."

✪✪✪✪

PHILIPS BOOK COLOUR TV

PHILIPS ● £249.95 ● 081 689 4444

IN BRIEF: The Philips Book is first and foremost a television set. It has a Scart socket on the back that will enable you to run it as a monitor, or you can use the aerial socket on the back of the ST and connect it to the TV. You will then have to tune the television in to the signal from the computer. This is not recommended if you want to use it for anything other than blatting aliens. Text is smudged and hard to read.

If you do get a Scart lead (priced at around £10 upwards from most dealers), you'll find that the picture quality improves considerably. You won't get as good an end product as a dedicated monitor, but you'll find it acceptable. For some applications, you will be able to get away with the Book. It is a compromise, but not quite as drastic as it first appears.

ST REVIEW COMMENT: "This is ideal if a dedicated monitor is too expensive, or if you just want to play games. It's a good way to get started, but remember, you need a TV licence for this one!"

✪✪✪

PROTAR PROSCREEN TT

PROTAR ● £732 (TT) ● £979 (MEGA STE + CARD) ● 0923 254133

IN BRIEF: This one is for serious users only. It will only run with a TT, Mega ST and Mega STE, and a graphics card is needed for all but the TT. The beauty of this monitor is the ability to display large areas of a document at any one time with pin-sharp detail.

It does take a lot of desk space and the advantages over an SM144 are only evident if you have a specific application that needs a large work area.

The controls are very simple, in fact, there's just an on/off switch on the back and a brightness control on the front! There is little need for more as the monitor has no sound, and being monochrome, no colour setting is needed. Grey tones can be set from within the type of programs that the Protar is designed to run with.

There are no compatibility problems. Anyone using Mega STs or the TT for very serious work in the design field should have one of these.

ST REVIEW COMMENT: "This is a serious monitor for serious applications – not one for the casual

BUYERS GUIDE

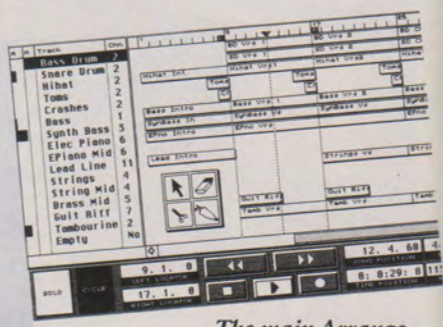
Here's how the monitors fare side-by-side

	Sup	S Size	T/S Stand	Stereo	Earphone	Pic Qual	Sou Qual	Price	Rating
Atari SM144	HCS	13	Y	N	N	9	8	£115.00	93
Atari SC1435	Silica	13	Y	Y	Y	9	8	£249.95	91
Philips CM8833 Mk II	Philips	13	N	Y	Y	8	8	£229.95	88
Philips Book TV	Philips	14	N	N	Y	6	7	£249.95	79
Proscreen TT	Protar	19	Y	N	N	9	8	£732.00*	83

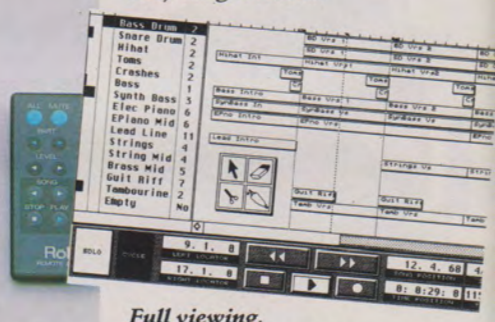
Picture quality and sound quality are rated out of a maximum of 10 *£932.00 for mega series KEY:Sup=Supplier, S/Size=Screen size (inches), T/S Stand=Tilt Swivel Stand, Pic Qual=Picture Quality, Sou Qual=Sound Quality,

WIN A COPY OF CUBASE LITE!

The winner of our coveted Essential Buy award (see the review on page 70), Cubase Lite is a dream come true for any of you who work with musical scores. Steinberg's Cubase is one of the major players in the sequencing market and Cubase Lite has the same intuitive Arrange window. Creating songs is a doddle and you can edit music in the most natural way. As for printing out the score, suffice to say that practically any printer is supported and that the quality is superb. Cubase Lite usually costs £99, but there are two copies up for grabs in this easy-to-enter competition.



The main Arrange window from Cubase Lite; the toolbox and visual side make for easy song creation.



Full viewing, editing and printing out of the staves make Cubase Lite perfect for anyone who works with scores.

THE LITE FANTASTIC

All you have to do to enter the competition is to answer the following questions:

1. How many tracks does Cubase Lite have?
2. How many quavers in a minim?
3. How many hours do you spend each week on ST music?
4. How do you rate ST Review's MIDI Monthly section (out of 10)?

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4. _____

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DEM-43	**PUNISH YOUR MACHINE:**Delta force Megadem(2 disks £2.75) $
DEM-61	**RRAP DEMO:**Turn your ST into a rap machine/beat box.
DEM-46	**EUROPEAN DEMOS:**Loadsa demos (2 disk set £2.75). $
DEM-45	**YO-DEMO:**From the Black Cats, Excellent, a must for any collection.
DEM-44	**SKID ROW:**Another brilliant 2 disk set for just £2.75. $
DEM-80	**LE JOLI PETIT MATIN:**Slightly bawdy but very funny comic strip.
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TRAX-1 to 30	**:**Disks and more disks full of mods for use with most PD Trackers.
TRAX-49	**ST SOUND MACHINE:**S/tracker with purely notation format $
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GAME-59	**MEGA MIX 4:**Dungeonz, Gravity, Life,Maze,Serendipity & more.
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GAME-21	**MONO 2:**STetris,Invader &Miner all in Mono
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MULTIPLE

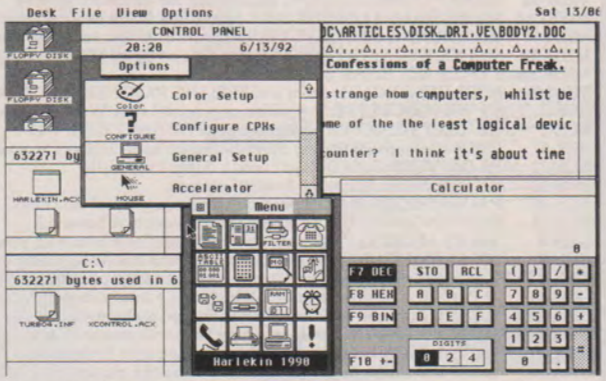
While the Mac has MultiFinder and the PC has Windows 3, multi-tasking has remained little more than a dream for ST owners - until now! Can the German solution MultiGEM really unlock the true potential of your ST? Nial Grimes investigates. . .

The ST's lack of multi-tasking abilities – being able to run several programs simultaneously – has been the major criticism levelled at Atari over the years. While desk accessories provide limited help in the multi-program stakes, the system is way behind competition from such companies as Commodore and Apple.

Imagine the situation: you are working on a winning page layout in ***Calamus DTP*** and notice a flaw in a piece of clip art. A multi-tasking ST would let you run an art package while keeping ***Calamus***, complete with document, in memory. Wishful thinking? No! Thanks to ***MultiGEM***, a new package from Maxon, these problems may now be a thing of the past.

INSTALLATION

Despite the manual being entirely in German at the time of writing, installation is actually very straightforward. A custom-designed program guides you right the way through, and on completion, you'll find a tailored version of MultiGEM in your AUTO folder; providing you boot with this disk, your ST will never be without its new-found split personality!



MultiGEM allows desk accessories to be run by simply double clicking on the icon – beats rebooting any day!

As far as the user is concerned, MultiGEM is completely transparent. It's an extension in the true sense of the word. Without careful studying of the accessory slots – which now contain the legend "MultiGEMslot" – you wouldn't even know it was there!

Launching a GEM application marks the first real change, in that all Desktop windows remain open. This makes it possible to run further programs without quitting the first. You'll find a list of all loaded tasks under the Desk menu heading.

Clicking on any of the empty slots returns you to the GEM Desktop where you can run more programs, up to a maximum of six at the same time. When more than one application is in memory, you can move between them by activating a window or selecting the appropriate name from the accessory menu.

"What about my huge collection of desk accessories?" I hear you cry. These won't prove a problem either, because multi-tasking isn't the only trick that MultiGEM has up its sleeve. Your accessories become programs that can be run like any others from the desktop – just double click on the icons and they will appear

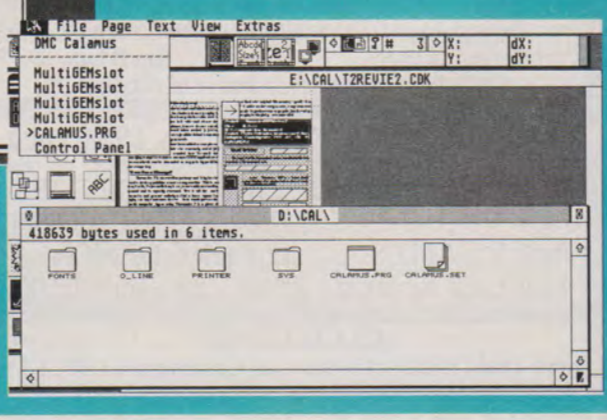
COMPATIBILITY

Of course the big question is compatibility: how much existing

STEP BY STEP

Five simple steps to a multi-tasking ST

1 ***Installing MultiGEM is a total breeze. Just select your boot drive – this will be A on a floppy system and usually C on a hard disk – and leave the rest to the installation program. Don't forget to have a blank disk handy if you're using floppies!***



2 ***Reboot your ST by pressing the reset button and after a brief introductory message, you will land on the GEM Desktop. Any program you run from now on – such as Calamus – will appear in one of these "MultiGEMslots". You'll notice that the Desktop window hasn't disappeared as it usually would.***

Allows up to six GEM applications to run simultaneously

Accessories can be run from the Desktop

Very easy to use

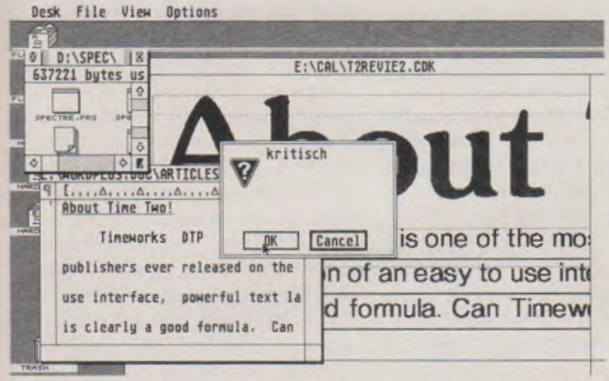
PROS AND CONS

Not compatible with all applications

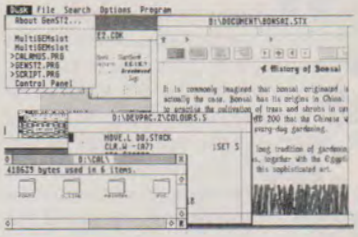
Documentation in German

No "virtual memory" support

CHOICE



Some programs destroy any other tasks in memory. Setting these to "critical" will force MultiGEM to give you a warning before they are run.



Desktop publishing, programming & document processing in unison. MultiGEM is nothing short of a miracle for serious ST users!

software will it run? For a start, ***MultiGEM*** will only talk to GEM applications – or those that use the familiar menu bar/window approach. Thankfully, this actually amounts to almost all ST business software available.

From the selection of GEM applications tested, around 90 per cent worked without problems. These included ***Calamus DTP***, ***First Word Plus***, ***Tempus***, ***PageStream***, ***Calligrapher Professional*** and ***Timeworks Publisher 1*** (just!). The only GEM legal packages found to cause major problems were ***Timeworks Publisher 2*** and ***NeoDesk 3***.

Another major fly in the ointment when it comes to multi-tasking on the ST, or any other machine for that matter, is memory. Since most serious ST packages require at least one Megabyte, and others like ***Calamus*** are happier with two, even a four Megabyte ST won't take you very far.

This isn't strictly ***MultiGEM***'s fault, although a "virtual memory" facility (the option to push unwanted tasks out of memory onto disk for a while) might have been a good idea.

WORTH THE HASSLE?

MultiGEM is not the first attempt at multi-tasking on the ST - witness the spectacularly average ***Twist*** and ***Revolver*** – but it's undoubtedly the best. ***MultiGEM*** is extremely stable and even when applications do crash (usually through no fault of ***MultiGEM***'s), all others in RAM remain intact.

Atari's own multi-tasking system, ***MultiTOS***, may be worth investigating, although if initial reports are to be believed, programs will be have to be specially modified to run properly. ***MultiGEM***, on the other hand requires no alterations whatsoever.

MultiGEM is a simple (if a little expensive) solution to a complicated problem. If your idea of multi-tasking is running several games or demos together, you are going to be deeply disappointed; but for serious user wanting an easy way to switch between DTP package and word processor, ***MultiGEM*** could very well be the solution you're looking for.

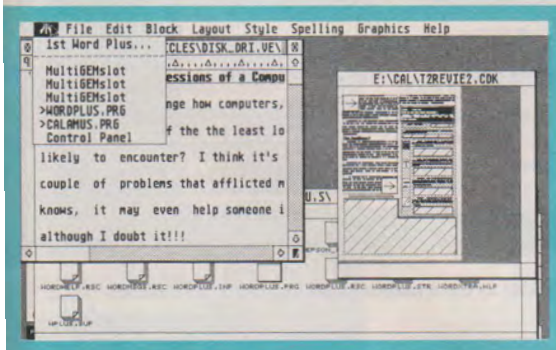
"The most successful attempt at multi-tasking on the ST"

NAME: MULTIGEM
COMPANY: MAXON COMPUTER GMBH/PAM SOFT
CONTACT: SCHWALBACHER STR. 52, W-6236 ESCHBORN

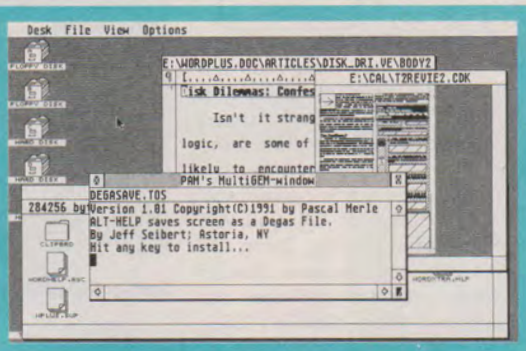
PRICE: AROUND £60
RELEASE DATE: OUT NOW
MIN MEMORY : 0.5MB (1MB & HARD DRIVE RECOMMENDED)

EASE OF USE	✪✪✪✪✪
DOCUMENTATION	✪✪✪✪✪
EFFECTIVENESS	✪✪✪✪✪
VALUE FOR MONEY	✪✪✪✪✪

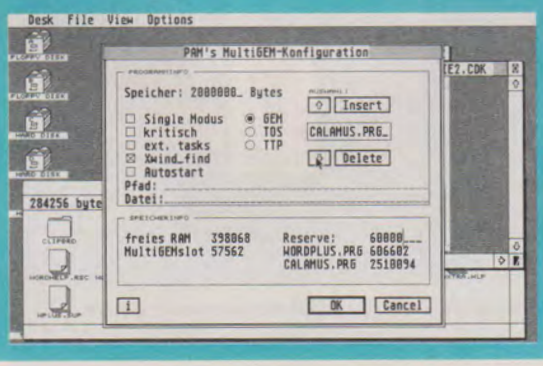
OVERALL **73%**



3 ***Select the Desktop window to bring it to the front and run another application by double clicking on an icon – in this case First Word Plus. You can now switch back to Calamus by choosing its window or by clicking on the name from the menu.***



4 ***Select an empty slot to return to the GEM Desktop. From this point you can run more programs or copy/move/delete files as usual.***



5 ***Using the preference editor, allocate the amount of memory you would like each of your applications to use. A few of the well-known packages such as Tempus, Word Plus, Calamus & Gemini come ready installed.***

INSIDE INFO

Every time you use GEM a message is sent to the "Event Manager".

MultiGEM intercepts these "Event" calls and shares the available processor time between up to six programs, or "tasks". The more programs that you have loaded, the slower the current task will run because a bigger slice of time is being taken to look after other applications in memory.

Persuading your ST to run in such a drastically different way has meant using some pretty unorthodox programming techniques. So unorthodox in fact, that a different "patch" is needed for each and every version of Atari's TOS operating system. MultiGEM Version 1.01 is quite happy to work with the following TOS versions: 1.2-1.6 (ST & STE), 2.05 (Mega STE) and 3.05 (TT). Updates are promised as new versions appear.

KEEPING TRA

Setting the clock every time you switch on can be a chore. Tony Kaye looks at the alternatives. . .

When updating files, it's essential to be able to see when you made the last change – especially when you're working on that smash hit program that's going to take the market by storm! By keeping track of when you last saved the data, you can see it is progressing and avoid the loss of valuable material. Anything you do needs to be backed up regularly to disk, or you run the risk of losing it if you have a system crash. You need to be able to see when you last backed up. In business, it's important to keep a record of when a letter was written too, so that when you have to refer back to it, all the relevant information is at hand, including when you wrote it.

Without a clock cartridge, the alternative means having to manually set the internal clock each time you use the ST. There are ways around this, though. You could go out and buy a Mega STE or a TT, or an ICD hard disk drive. This would give you a built-in clock which will be set all the time. What? You haven't got £300 plus for a new hard disk drive? You can't afford a Mega or a TT? You still want to have the time set for you? The simple answer to this problem is to invest in a clock cartridge.

A cartridge clock is simply plugged in to the ST cartridge port and, by adding a program to your AUTO folder, will make sure that the internal clock is set whenever you need it. They are designed with a throughport, enabling you to connect any existing cartridges that you have through them.

There are many existing programs that will take advantage of an internal clock where present, including a range available in the Public Domain. These include alarm clocks, diaries, word processors and many others. Even the Ultimate Virus Killer no longer asks you for the date every time you use it.

FORGET-ME-CLOCK II

The Forget-Me-Clock II from Frontier Software comes in a well presented box complete with a disk and eight-page user manual

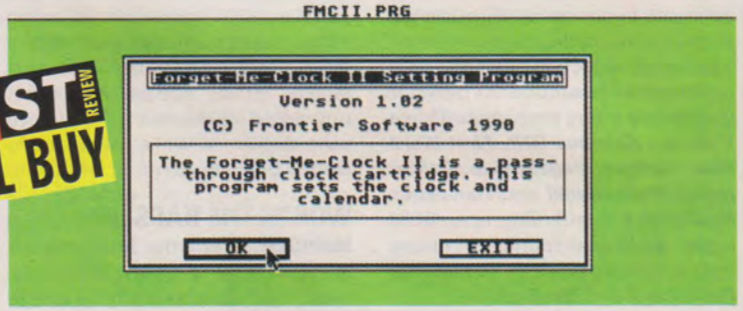
ATARI ST REVIEW ESSENTIAL BUY

To install Forget-Me-Clock II, turn off your ST and plug the cartridge into the cartridge port on the left-hand side. The cartridge is clearly marked as to which way round it should go.

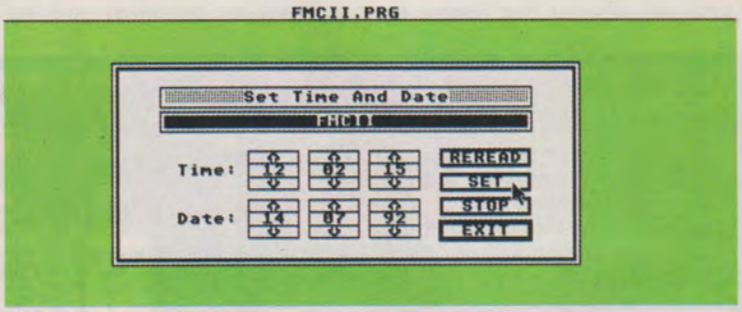
Make sure that the words Forget Me Clock II are facing you and that the red arrows are pointing in towards the computer. Press it in firmly. You can now plug any other cartridges you have in to the throughport. Place the supplied utilities disk in drive A and turn the computer back on. The auto run program on the disk will inform you that the clock is not running as all clocks are stopped for shipping to conserve the battery.

AUTO FOLDER

It is important to place the program FMCAUTO.PRG on to any boot disk you use otherwise the clock will not be read. There is a program on the disk called FMCII.PRG. This is used to set the clock, so run this now. You are presented with a title screen and if you now click on OK, you will have the setting utility. Using the arrows with your mouse, change the time and date until they are correct and then click on SET.



Title screen for the Forget-Me-Clock II setting program.

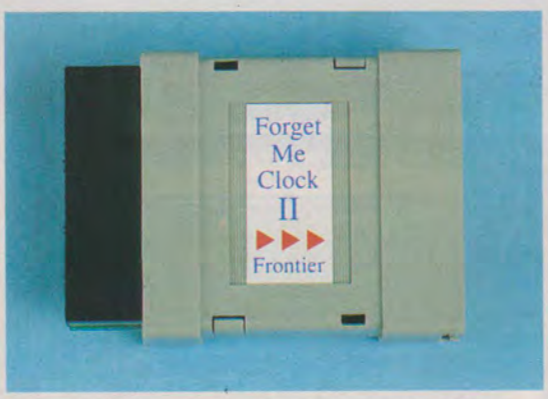


Setting is a matter of clicking on the arrows until the correct time is shown.

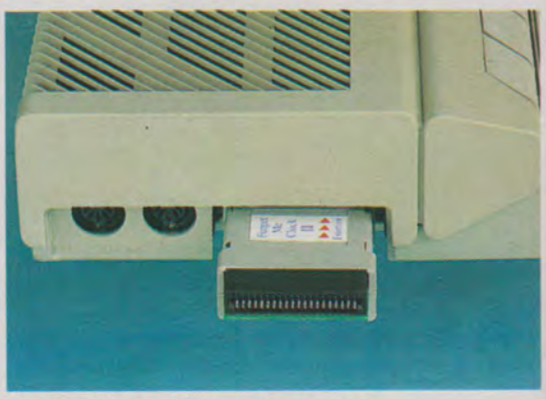
Neat packaging
Adequate manual
Backup copy of software to ensure it runs
Two year guarantee (including the battery)

PROS AND CONS

Sticks out of the side of the ST
Can make connection of other cartridges awkward



The Forget-Me-Clock II: a useful and clean-looking add-on.



The FMC II in place. Not too obtrusive, is it?

CK OF TIME

CONCLUSIONS

A clock cartridge certainly seems to be an essential add-on, and no serious user should be without one.

Although the Forget Me Clock II costs £3 more than the Real Time Clock, our tests indicate that the former is by far the better buy. We had no problems with Forget Me Clock II, whereas two out of three of the Alfa Data products supplied to us were faulty. When it does work, however, there is little to choose between the two.

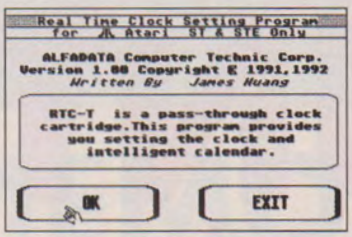
REAL TIME CLOCK

Although basically the same as Forget-Me-Clock II, the packaging is far more simplistic – a blister pack containing the cartridge and disk

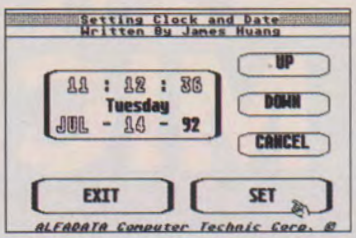
There are four lines of text on the back of the pack with basic instructions on how to install the clock. Again, a red arrow shows the correct way to insert the cartridge. You are directed to the README file on the supplied disk.

REBOOT

Once the clock is installed, it's time to reboot. The system comes up in low resolution, so you need to set the preferences to medium resolution. Double-clicking on the README file tells you that the program for your AUTO folder is called RTC_AUTO.PRG and the setting program is RTC_SET.PRG. The README file is just 1417 bytes long! Curiously, the dates stamped on the files include the entries 00-00-28 and 24-12-04 – a practical example of one of the disadvantages of writing programs without having the benefit of a clock cartridge.



Left: the welcome screen for the Real Time Clock.



Right: The Real Time Clock is a little trickier to set than Forget-Me-Clock II – notice the lack of a STOP button.

The setting program is more comprehensive than for the Forget Me Clock II, but the first thing to notice is that there is no facility to stop the clock. To set this one, you have to highlight the time or date element that you wish to change and then click on UP or DOWN. When complete, the SET key will install the correct settings in the cartridge. Reboot the computer and the clock should be set.

Unfortunately, two out of three Real Time Clocks tested were found to be faulty. This would suggest that they are unreliable, which is reflected in the scoring.

Click on REREAD to make sure that the cartridge is set correctly.

The STOP box is fairly self-explanatory: it simply stops the clock. This is a feature that will prove useful for extending battery life if the computer is not going to be used for a long time.

The next step is to reboot your computer. Your Forget Me Clock II is now installed.

This is a well-designed package and the clock cartridge comes with a two year guarantee, which even includes the battery. Despite one or two minor niggles, this is a great package to go for.

There really is only one design for a throughport clock, but note the lip on the extended port.

Once installed, the two clocks look similar, but will this one work?

Three PD utilities on the disk
Costs less than its rival

PROS AND CONS

Simplistic packaging
Barely sufficient instructions
Poor software
Two out of three supplied did not work

"A good, well engineered product. Get one now"

NAME: Forget-Me-Clock II
COMPANY: Marpet Developments
CONTACT: 0423 712600

PRICE: £17.95
RELEASE DATE: NOW
MIN MEMORY : N/A

EASE OF USE	★★★★★
DOCUMENTATION	★★★★★
EFFECTIVENESS	★★★★★
VALUE FOR MONEY	★★★★★

OVERALL 91%

"This is tricky software, which may cause a few problems"

NAME: Alfa-Data Real Time Clock
COMPANY: Gasteiner Technologies
CONTACT: 081 365 1151

PRICE: £14.95
RELEASE DATE: NOW
MIN MEMORY : N/A

EASE OF USE	★★☆☆☆
DOCUMENTATION	★☆☆☆☆
EFFECTIVENESS	★★★★☆
VALUE FOR MONEY	★★★★★

OVERALL 70%

BEAT-IT

DR TIRICC MIDI RHYTHM FILES

All of you who bought last month ST Review will have a copy of the fabulous Dr Tiricc – as given away free on last month's cover disk. This month, Intrinsic Technology are offering all you newly converted master musicians, 100 rhythms for you to use and customise and all in standard MIDI format, which will load into Dr Tiricc.

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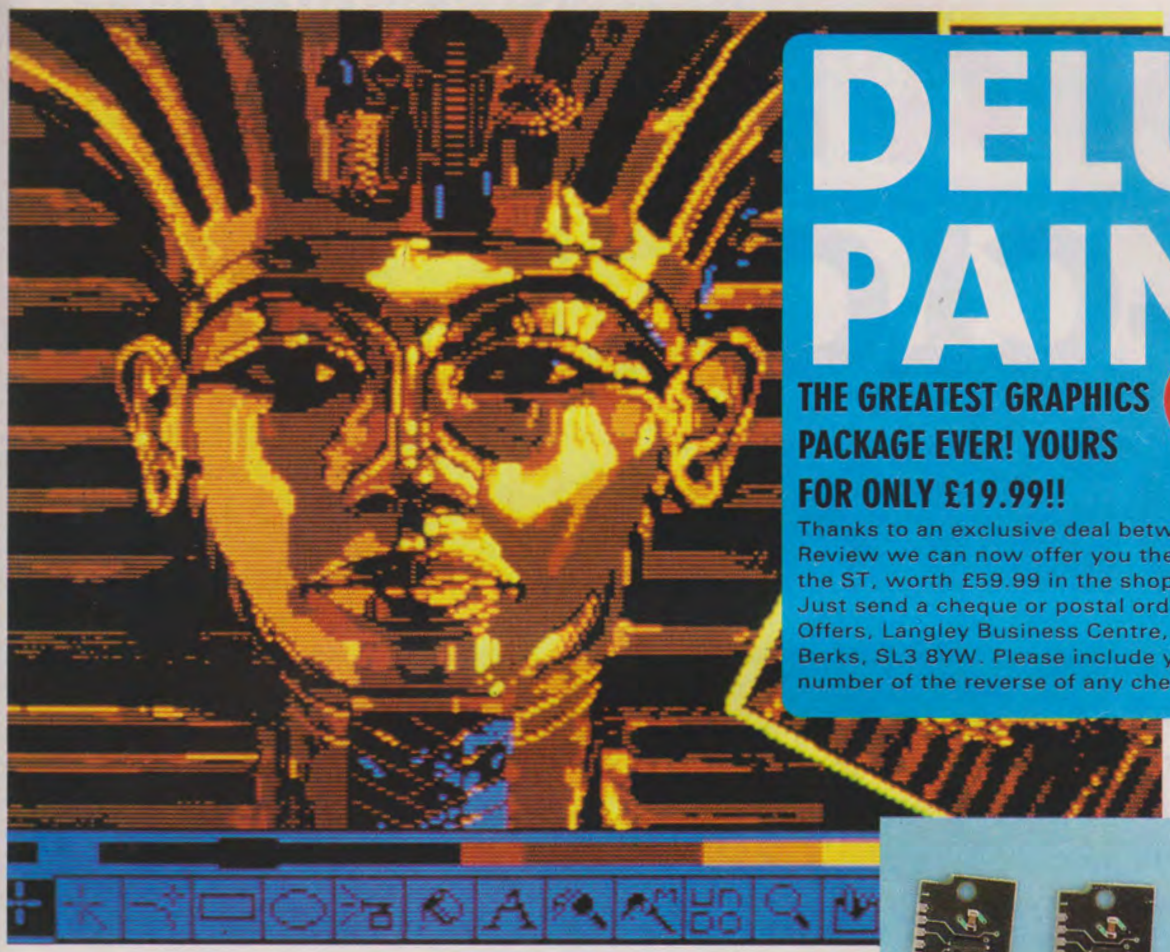

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THE CHEAPEST MEMORY ANYWHERE!

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ST Review's campaign to get everyone up to one Megabyte of memory continues this month. For only £15.50 including post and packaging, you could slot a couple of Single In-Line Memory Modules into your STE and open your eyes to the world of one Megabyte games. Simple to install, and easy to use, get your upgrade now while stocks last! Each upgrade comes with full fitting instructions and a free technical support telephone number.

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Address.....

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Postcode.....**Telephone**.....

Please tick the item you require:

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☐	ST Review mouse		£14.95

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Offers are only open to UK Residents. Video Titler enquiries please call 0579 82426. Technical memory upgrade queries please phone: 0423 712600 for STFM 081 777 0751 for STE . Enquiries regarding delivery please call 0733 896858 Fulfilment: Peterborough Mailing, 21, The Square, Vicarage Farm Rd, Peterborough, PE1 5TT. Enquiries regarding Deluxe Paint, call 0753 549442.

WIN A FORGET-ME-CLOCK II WORTH £17.95

You've read the review, now's your chance to win one for yourself. This essential add-on can be yours for the cost of a stamp and a few minutes' serious thought. We've got five to give away, so get scribbling now. . .

Forget-Me-Clock II

Clock Cartridge For The Atari ST/STᴱ Series

- Clock Cartridge with full pass through
- Easy installation - Just plug it into your ST's cartridge port and it's ready to use
- Sets system and keyboard clocks every time you turn on or reset your ST or STᴱ
- Full pass through means that you can use any other cartridge at the same time
- Designed and manufactured in the UK
- Ten day no-quibble money back offer
- Two year guarantee - Including the battery

We gave the Forget-Me-Clock II clock cartridge an Essential Buy award. Now we give you the chance to judge for yourself. Marpet Developments have donated not one, but five of the punctilious little beauties for us to give away

The Forget-Me-Clock II simply plugs into the cartridge port of your ST and will keep track of time for you. You'll find that all of the files that you save will have a time and date stamped on them, so you can instantly see exactly when they were written.

All you have to do to win one of these essential extras is to complete the questions opposite and send them to us on a postcard. You will find the answers to the questions in the review itself.

THE QUESTIONS

To win a Forget-Me-Clock II, just answer the questions below.

1. How do you connect the Forget-Me-Clock II to your ST?

2. What is the name of the clock setting program for the Forget-Me-Clock II?

Send your answers on a postcard to: Clock This! ST Review, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU. Winners will be drawn from the correct answers after the closing date of 14th September.

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"thrilling ... the greatest experience in flight simulator history." PC Format

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"game dynamics impossible to duplicate in conventional computer simulation." Omni

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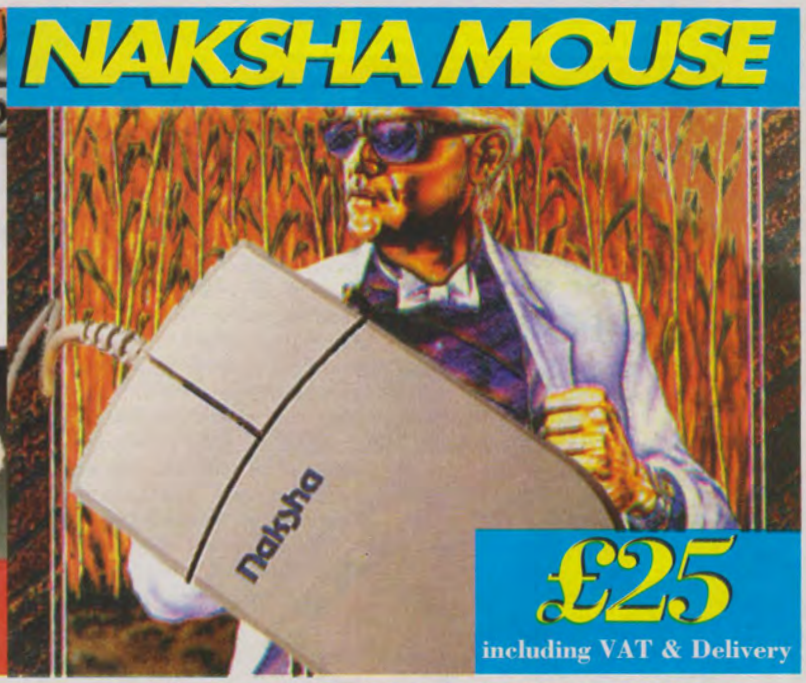

THE ONLY SCANNER THAT IS INTERCHANGABLE BETWEEN ATARI & AMIGA

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- Unique scanning controls • Converts dithered scanned images to greyscale
- Loads / Saves a wide variety of popular image formats • Four zoom modes
- Supports a variety of screen resolutions • On-screen locater and magnifier
- Easy to use editing feature for painting, drawing, special effects & scalable fonts

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TWO SIDES OF

The main screen of STraight FAX: two faxes have been received and are waiting to be read.

Modems are nothing new, but what about one which can send and receive faxes?

A modem is normally used only to connect a computer to a Bulletin Board Service (BBS), which is useful for obtaining specialist information and finding public domain programs, but little else. However, a fax machine is a very different story. These machines have become part and parcel of everyday life for a whole host of people, especially those involved in working from home. The ability to send a full A4 sheet of text to the other side of Britain, or the world, in less than 20 seconds is an extremely cost-conscious way to work. The decrease in the price of a fax has contributed to its popularity, but a reasonable fax machine is still going to cost upwards of £300.

What does a typical fax (short for "facsimile") machine consist of? There are three elements: an optical scanner to "read" text and pictures as a series of dots – effectively as a bitmap image; a special type of modem to transmit that image via a telephone line; and a printer (usually thermal) to imprint the image onto paper for you to read. So how about a combined fax modem with a computer? This cuts out two of the three elements; the received image can be seen on the computer screen, doing away with the printer part, while messages and pictures can be created and set up in a word processor, removing the need for a scanner. The result is a situation which costs a fraction of the price.

You can't just use any old modem as a fax modem. A Class 2 fax modem incorporates the modem part of a fax machine with a data modem, providing for send and receive fax capability directly from a computer. Such devices have been available for some time; the problem has been finding a program for the ST which will operate a fax modem. Here we look at the Smart One modem and STraight FAX program for the ST which have been bundled together by the London-based company, HCS.

THE MODEM SIDE

In appearance Smart One is a little tacky. The casing is made of beige-coloured plastic, with eight LEDs on the front panel to show power-on, receive, transmit and various other functions. The rear panel simply has American connectors for the telephone line and an optional telephone, an RS 232 socket for connection to a computer, a power supply input and an on/off switch. A lead is provided for connection to a UK telephone socket and a UK power supply also comes as standard.

Smart One is nothing out of the ordinary when considered as a modem. It conforms to the V.22bis standard (2400 bits per second) which means that it is capable of receiving a maximum of 240 characters per second (cps), the minimum for a reasonable modem of today. However, Smart One supports neither MNP (Microcom Networking Protocol, named after the company who developed it) error correction or data compression, both of which are standard on most modems costing over £100. The data compression is a nice facility, but is not essential as a transfer protocol such as ***ZModem***, available with many public domain comms programs, will compress data on the fly, thus providing a greater effective throughput than the 240 cps that can be obtained from a V.22bis modem.

The error correction part is another case altogether. Without MNP error correction, any line noise will be picked up and appear to be part of the data being transferred. This leads to errors in data transfer and such a

STraight FAX software is easy to use and leads to good results
Inexpensive fax/modem combination
Can transmit Pagestream and Calamus files

PROS AND CONS

Modem side susceptible to line noise
No MNP error correction
Can't combine text and pictures on a fax

THE SMART ONE

STraight FAX recognises whether a fax being received is in Normal or Fine resolution and shows this in its Status box. This also shows the File name being assigned to the fax, the Baud Rate and what page is currently being received.

problem certainly dogs Smart One; useage on a noisy line leads to poor results.

Smart One was used with ***DTerm***, a public domain comms program that is available for the ST, and the ***ZModem*** protocol. On a noise-free line it performed well; data transfer of up to 239 cps was achieved with either text or .LZH (compressed) files.

There is no non-volatile memory in Smart One. In other words, you can't save alterations to settings or commonly used telephone numbers. Apparently, this is available as an optional extra for around £10 and is necessary unless you like to input the same settings and telephone numbers each time you use Smart One.

THE FAX SIDE

The software that naturally comes with Smart One is of no use to the ST – ***Fast Link II*** is for use with a PC. However, HCS has bundled ***STraight FAX*** with Smart One and this seems a very good choice.

STraight FAX is a GEM program which runs in high and medium resolutions; the main screen has a menu bar as one would expect and 10 functions assigned to the ST's function keys along the bottom of the screen (similar to ***First Word Plus***). Chances are that you won't need to look at the manual at all as there's an on-line help file to guide you through.Sending a fax is simple. Design a cover page (the first page of the fax which is sent every time with only certain details altered), import a text file from a word processor and set the telephone number for the person to whom the fax is to be sent. If you want to send it later, just set the date and time in the Sched uler. Text and pictures can't be mixed (apart from on the cover page) and ***STraight FAX*** doesn't let you edit text, but you can always use a desk accessory word processor such as ***Diary***. ***STraight FAX*** is set, as default, to receive faxes automatically. It can tell whether a fax has been sent in standard or high resolution but takes no notice of any other hardware fax settings such as super-fine resolution or light/dark original. Once a fax has been received, you can view it on-screen and carry out various very basic edits such as viewing at half size. A fax can be saved as an .IMG file for import into a graphics package.

As a fax is saved as a bitmapped image, file sizes can be rather large – 50 Kilobytes or more in fine resolution if there is a lot of text or a complex image.

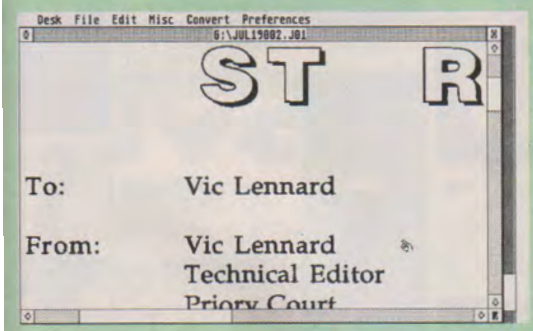
Consequently, most users will want to print out to hardcopy. ***STraight FAX*** uses any version of GDOS including FONT GDOS and FSM GDOS; Install GDOS at boot-up, select an Assign.SYS file which has the printer driver installed and ***STraight FAX*** uses this. GDOS is never easy to work with and if you don't usually use it, you will have to get hold of a copy from a PD library. Included are special drivers to write fax files directly from ***Pagestream*** and ***Calamus*** files.

Information about faxes sent and received are kept in separate logs, and a hand scanner can be used in order to directly create a fax output.

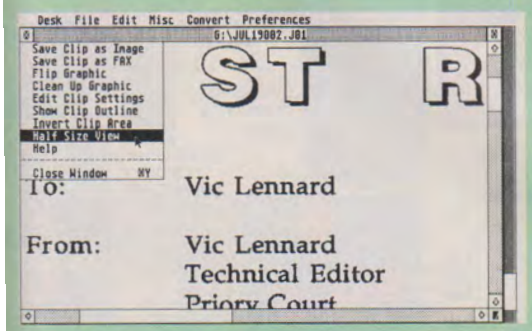
VERDICT

As a modem, Smart One doesn't really live up to its name. In conjunction with ***STraight FAX***, however, it certainly does.

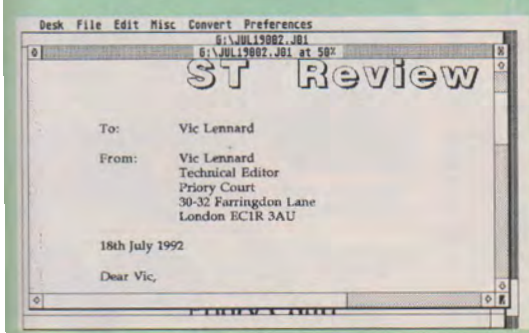
In comparison with a dedicated fax machine, you can't take a sheet of paper and send it (unless, that is, you use an A4 scanner which negates the whole point of the exercise) and to have an effective system, the computer has to be permanently left on. However, a fax modem is going to be considerably cheaper than two dedicated units, and Smart One is certainly an inexpensive option. It is definitely one that is worthy of consideration.



Chances are that the received fax will be too big to be properly viewed on-screen.



Using the View Window Command Menu, basic edits can be made which include being able to use the Half Size View.



This opens a second window and reduces the fax to a size which is then readable. Using a GDOS printer driver, you can also print a fax out to hardcopy.

INSIDE INFO

Ever wondered how a fax machine works? The optical scanner senses the light and dark areas of the page being transmitted and converts them into a series of black and white dots arranged as rows of scan lines with each row containing 1728 dots. Normal resolution gives 200 dpi (dots per inch) horizontally by 100 dpi vertically while fine resolution doubles the number of vertical dots. Compare this with a laser printer which gives results of 300 dots per inch horizontally and vertically.

Once a connection has been established, each line of dots is compressed to reduce the transfer time by using a technique called Huffman Encoding which is similar to LZH compression on the ST. The receiver then decodes each line and transfers it to paper, usually by means of a thermal printer.

Unlike a modem, while a fax machine can tell when errors have occurred in transmission, it cannot ask for a retransmission. It simply prints the line, errors and all; consequently, bad line noise results in poor printed copy.

"An interesting and relatively cheap alternative to a fax machine, with an average modem thrown in for good measure"

NAME: SMART ONE & STraight FAX
COMPANY: HCS
CONTACT: 081-777 0751

PRICE: SMART ONE £119.00, STraight ONE £45.00 (combined package £139.99)
RELEASE DATE: OUT NOW

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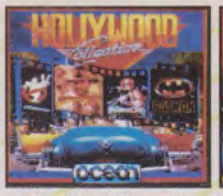

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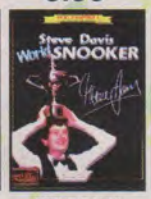

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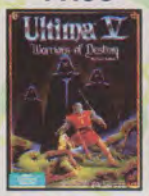

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This is your chance to automate your home office with a Smart One fax modem and the excellent STraight FAX program. Courtesy of HCS, this pair is up for grabs this month

BE SHARP AND WIN A SMART ONE!

While fax machines have certainly come down in price over the last few years, they are still relatively expensive. After all, a fax is only a computer, modem and scanner rolled into one.

If you've had a look at the review of Smart One, which begins on page 64, your appetite will probably have been whetted for one of these, especially as it comes combined with the ***STraight FAX*** software.

INFORMATION AT YOUR FINGERTIPS

Smart One will also let you log onto lots of bulletin boards (there's a list of ST-friendly ones on page 137) where you can gain information on practically any subject and download public domain and shareware programs.

All you have to do to enter is to correctly answer our questions about the Smart One. There are no catches as all of the answers are contained in the review. The difficult bit is telling us who you would send your first fax to and why – extra points will be awarded for originality!

THE QUESTIONS:

1. How many characters per second can Smart One receive as a modem?

2. What is the normal horizontal resolution (in dots per inch) of a fax machine?

3. What do the initials BBS stand for?

Answers:

1. _____

2. _____

3. _____

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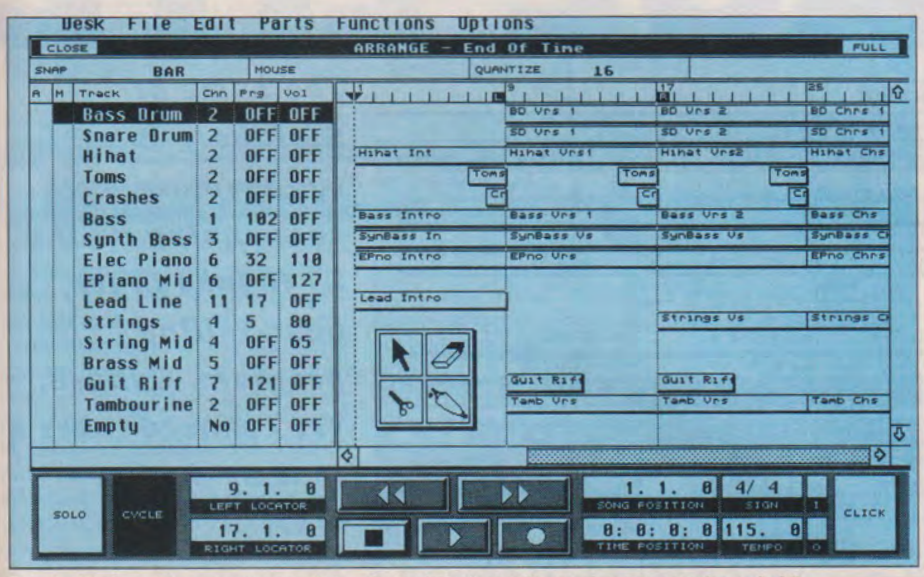
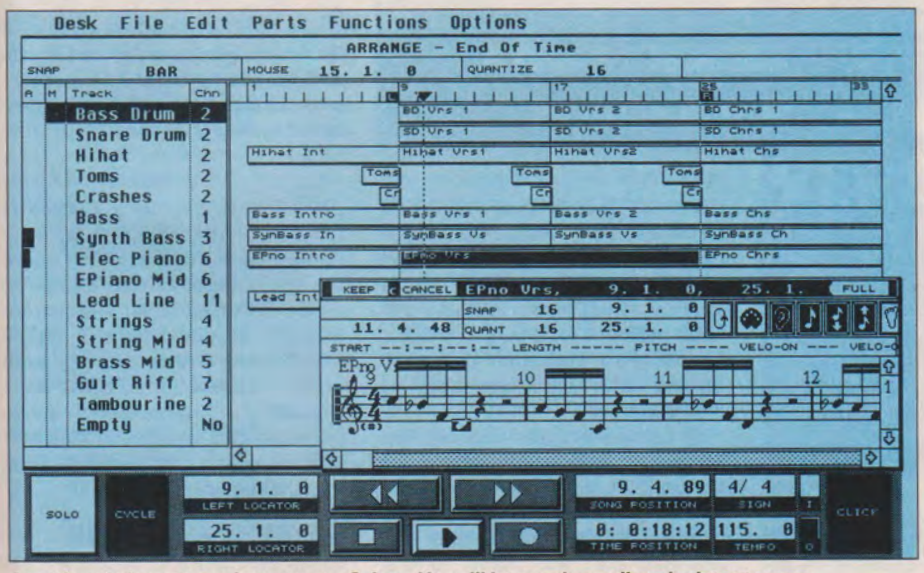
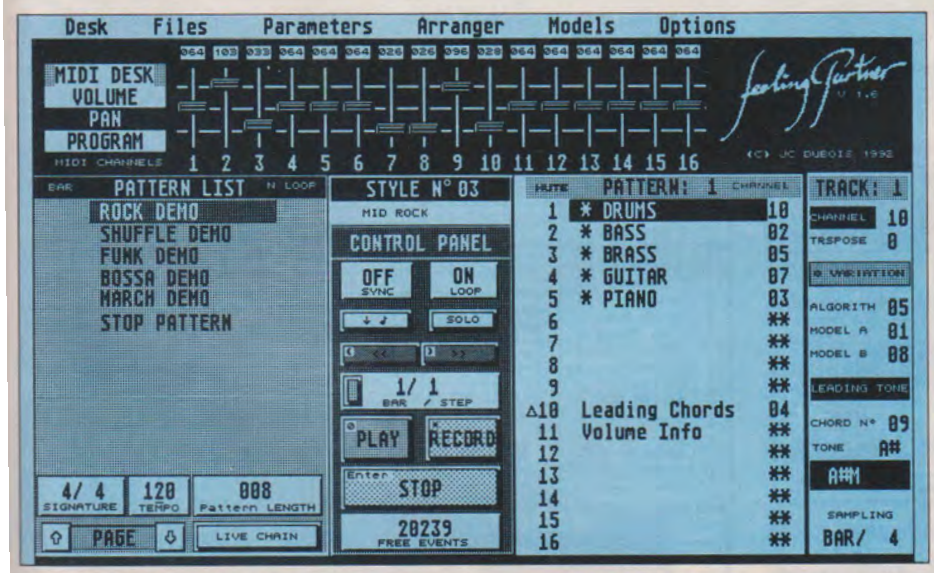
MIDI MONTHLY



A typical Cubase Lite arrangement. Using the tools in the toolbox make song creation a doddle.



Apart from being a 16-track sequencer, Cubase Lite will let you view, edit and print out scores.



Version 1.6 of Feeling Partner has improvements to the accompaniment creation side, real time controls and live performance aspects.

This issue, MIDI Monthly looks closely at Steinberg's Cubase Lite, the score editing and printing sequencer which costs only £99. How good is it? See the review starting on page 70.

Auto-accompaniment programs and sequencers are usually separate programs, but Feeling Partner is one of the only programs which crosses over the boundaries. Version 1.6 is a major update; read about the extra facilities on page 72.

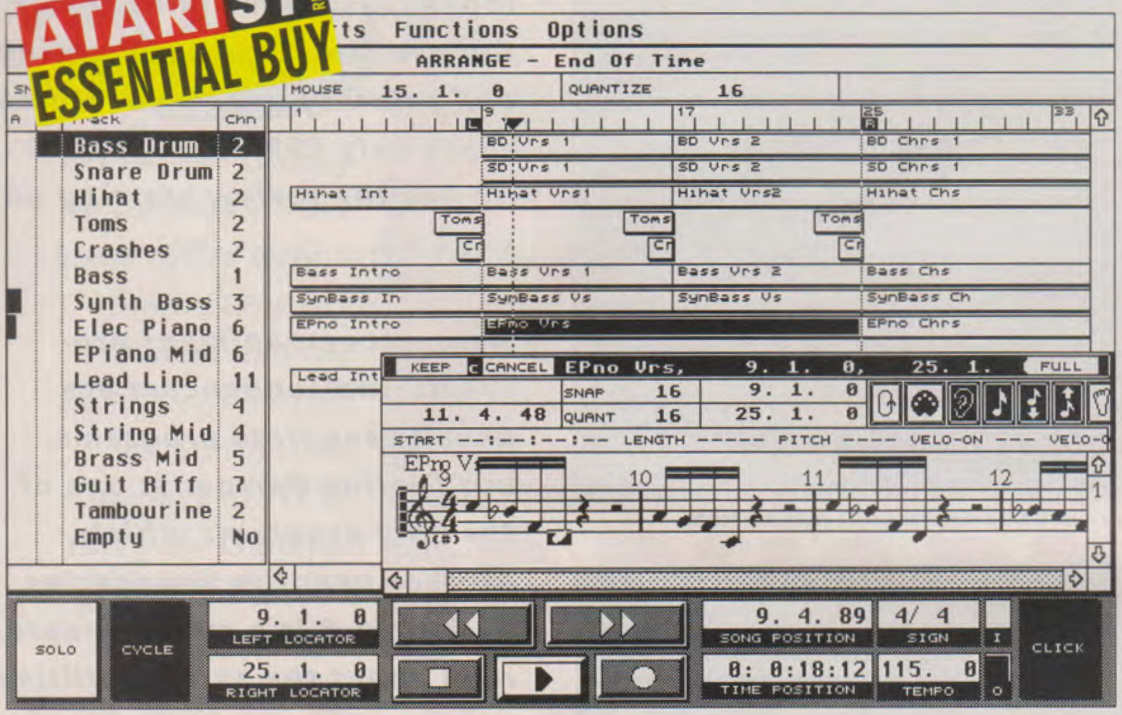
Building a MIDI System continues on page 73 while MIDI Points examines General MIDI on page 77. Finally, Modest MIDI is the jargon-buster where all of those terms you keep hearing get explained.

If the Cubase Lite review whets your appetite, have a look at the competition on page 54 where we have two copies up for grabs.

If you have any MIDI problems which no-one else can answer, just drop a line to me, Vic Lennard, at MIDI Monthly. In the meantime, enjoy the read and get to work on the competition ...

CUBASE LITE

ATARI ST REVIEW
ESSENTIAL BUY



The name of Steinberg is synonymous with sequencing on the ST thanks to its best-selling program, Cubase. Vic Lennard takes a look at the lite side...

The Arrange window of Cubase Lite with the Score Editor overlaid. Editing of the score can take place while viewing the current position in the song.

Last issue in MIDI Monthly we reviewed Microdeal's ***Concerto*** which received a Budget Buy award. However, its one failing was the lack of ability to print out a score and such a facility doesn't usually come cheaply. The two prime examples of sequencers with comprehensive score editing and printing facilities are Steinberg's ***Cubase*** and C-Lab's ***Notator***, both of which cost over £450.

Steinberg already has a cut-down version of ***Cubase*** in ***Cubeat***, but one of the main functions which has been removed is that of working with, or printing, a score.

With ***Cubase Lite***, the company appears to have taken a leaf out of C-Lab's book by bringing in an entry-level scoring program. The only real difference between the two is that ***Cubase Lite*** is half the price of C-Lab's ***Notator Alpha***...

SEQUENCING FEATURES

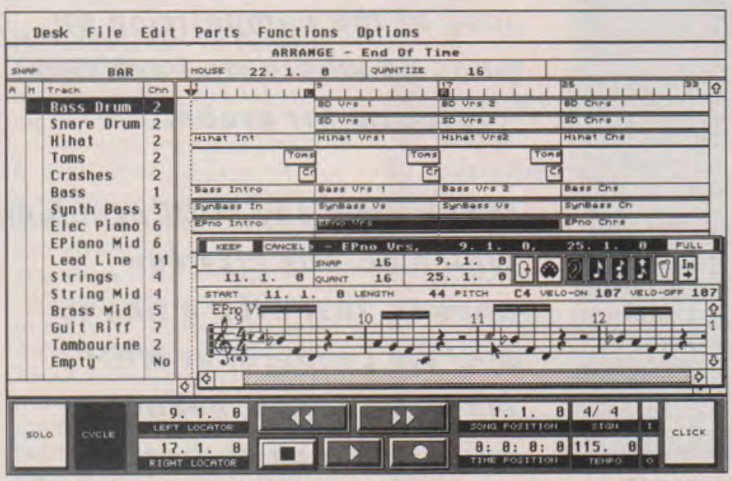
Cubase Lite is a 16-track sequencer, but it's unfair to look upon this number of tracks as being a limitation because multiple tracks can be merged together without losing any information. The main screen is called the Arrange window and is the chief reason for ***Cubase***'s popularity; the make-up of an entire song can be viewed as a series of rectangular parts which can be copied from one section of a song to another. If you have created a difficult bass line for a verse, you can simply grab the rectangle representing that part and copy it anywhere else.

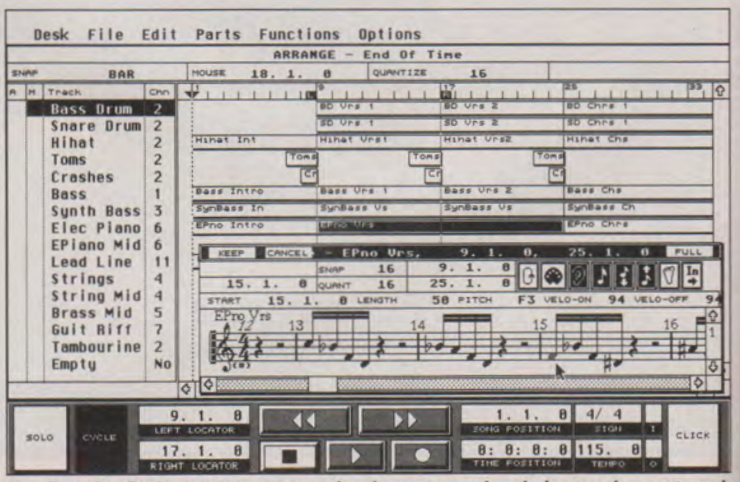
By using the Alternate key, the copy is an independent version of the original, while using the Control key gives a ghost copy. This is identical to the original, but any changes that are made to the original will also show up in the ghost copy. Working with music as a series of boxes on a screen has to be one of the easiest ways of arranging a song.

Another reason why ***Cubase*** is looked upon as being highly intuitive is the toolbox. Holding down the right mouse button brings up a box with four tools. The pointer is used to grab items such as parts, notes and so on, while the eraser deletes any item it is clicked on. The scissors divide parts up into smaller entities and the glue tool puts them back together again!

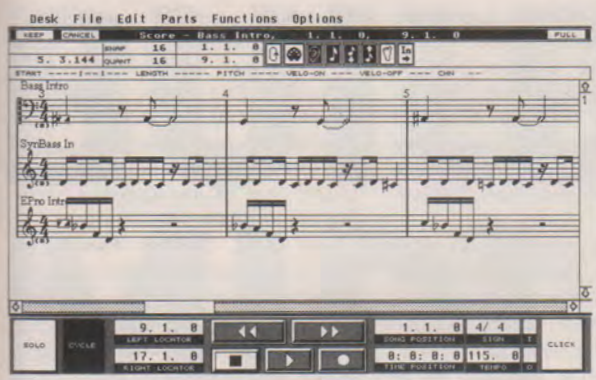
A TYPICAL RECORDING

How difficult is it to record a part? Not very. Double-click on the track name to enter a meaningful name of up to 10 characters and set the MIDI channel to that of the sound you are using. Set the right and





By resizing the Score window, both the score and arrangement can be seen at the same time. By using Cycle, you can see exactly where you are in relation to other parts and continue editing the score. Simply click on a note and move it where you want it to be.



By selecting more than one part, scores for mutiple parts can be viewed, and printed at the same time.

left locators to the start and end of the part you want to record – these are moved by clicking with the left and right mouse buttons in the bar counter at the top of the screen. Double-click in the region between the locators and a black part box appears. Hit the "*" key in the keypad, wait for the one bar pre-count, and play on the attached keyboard; you can see where you're up to by either the line moving across the screen or by looking at the Song or Time position boxes in the transport section. By selecting Click, you also get a metronome. That's it ... one part created.

If the Cycle function is turned on, the part you have just created will automatically playback, and you can add additional notes if you want to. All of the transport buttons can be controlled from keys on the numeric pad of the ST. In fact, you can create an entire song without stopping by moving from one track to the next (using the cursor keys), creating new parts as necessary, moving locators and using Cycle.

The timing is out? Use the Quantise facility in the Functions menu – the current quantise value is always shown above the Arrange window. You've chosen the wrong value? Hit the U key; you can always undo any quantising that has taken place. You need to transpose a part or change the velocity? Facilities for these are also found under the Functions menu. The creation and basic editing of a song continues along these lines.

WHAT'S THE SCORE?

The main point of buying ***Cubase Lite*** is to use the scoring facility. Select any part and hit Control-R to enter the Score Page which presents that part on a stave with a treble clef. Editing notes is accomplished by simply clicking on a note and moving it to where it's required.

An alternative to this is to use the info line above the score which becomes active whenever you click on a note. This gives the start point of a note, the length, pitch, velocity and MIDI channel, any of which can be altered by clicking and holding the mouse buttons for incrementing and decrementing, or by double-clicking and entering the new value in the box which appears.

When you hold down the right mouse button, a special toolbox for this window appears, this time with the pointer and eraser as before, but in this case with two new tools; rest and note. These let you add notes (or rests) to a score as well as deleting (eraser) and moving (pointer) them. Alterations via a MIDI keyboard are also possible as is looping any particular bars or inserting information by step entry.

Double-clicking on the clef brings up the Score Display box from which you can change various visual attributes of the score, a most important area if what you print out is to bear any relationship to what you have in mind. Split is the most important function here, because it lets you display a grand staff of treble and bass clef and set the split point between them.

No Overlap and Syncopes are used to ensure that a score is tidied up visually while Auto Clef and Auto Quantise allow ***Cubase Lite*** to decide on default settings for these functions dependent on the musical content.

If you want to print multiple parts on the same score, select all of the relevant parts on the Arrange window. ***Cubase Lite*** will handle up to 15 parts at the same time; ***Notator Alpha*** will only give you access to a maximum of four.

MARKS, GET SET ... PRINT

Having set up the score to your taste, the Printer Setup allows you to set margins around the window and to choose the driver to suit your printer. Most appear to be covered; Epson FX and LQ will generically handle 9- and 24-pin printing respectively, while HPJet covers most laser printers and should also deal with Inkjets, although this could not be tested at the time of writing. Others such as the Atari SLM-804 laser, NEC P6 and certain Seikosha models have their own drivers. On hitting OK, the score is shown as it will look on the printout. Double Click on the title, and the Score-Title box lets you select the font and font size that you want for the title and for any comments or copyright information.

From the Score window, select the print option and choose between fast and best – this is a similar idea to draft and final on a word processor. Fast uses only half of the available dot resolution of the printer.

The printout quality will obviously depend on what printer you are using. It was tested on both a 24-pin and laser printer and the results were certainly good.

"Worth careful consideration if you want to edit and print out a score"

NAME: CUBASE LITE
COMPANY: HARMAN AUDIO
CONTACT: 0753 576911

PRICE: £99.00
RELEASE DATE: OUT NOW
MIN MEMORY : 1 MB

EASE OF USE	●●●●●
DOCUMENTATION	●●●●○
EFFECTIVENESS	●●●●●
VALUE FOR MONEY	●●●●○

OVERALL 92%

VERDICT

The lack of any other editing screens apart from the scoring one limits the market appeal of Cubase Lite, but there are many people who want exactly such a sequencer. The score can be edited quite substantially and the printout is of good quality. There are also various facilities which have remained unmentioned, including MIDI File import and export and MIDI Clock output to lock on a drum machine.

Cubase Lite is perfect for the educational market and for musicians who are fed up with having to visualise music as a bunch of lines and numbers. If you are amongst these, give Cubase Lite a long, hard look.

Arrangement window and toolbox make song creation very easy to achieve

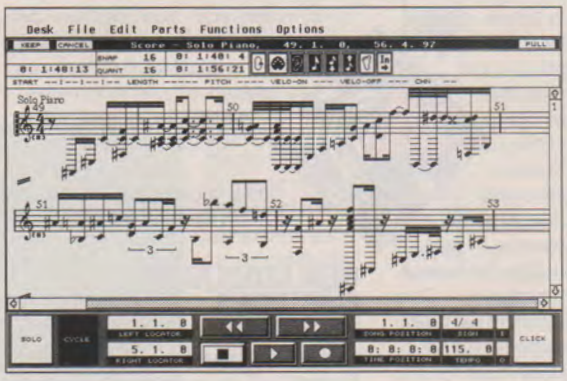
Can print out up to 15 parts at the same time

The cheapest price going for a score editing and printout package

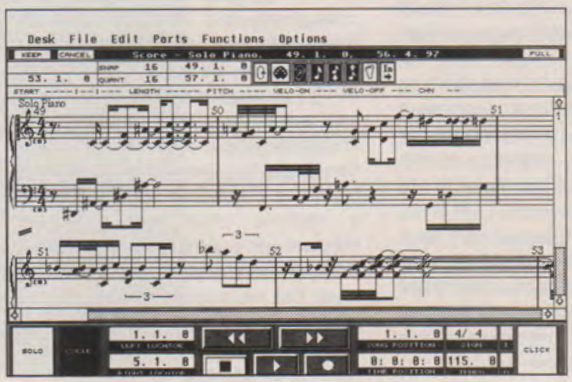
PROS AND CONS

Score-only editing limits the number of people who will be interested

Mono monitor only



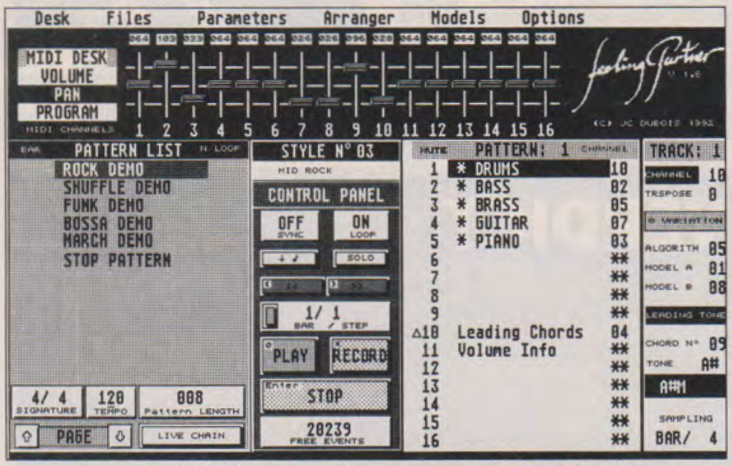
Taking a piano solo, the score looks like this when first entering the Score Editor. The score display then lets you set a split point...



...after which the score appears on a Grand Staff. Changing the Score Display parameters for key signature also lets you convert the score to any key.

FEELING PARTNER 1.6

Feeling Partner was thoroughly reviewed in the 32-page supplement with the first issue of ST Review. How has this upgrade improved it?



Feeling Partner is nicely laid out; the mixer at the top of the screen has become an important feature now that fader movements can be recorded in real time.

There are two types of sequencing package generally available on the ST. There's the straightforward sequencer which acts like a tape recorder for MIDI and accurately records what you play in from a keyboard. Microdeal's ***Concerto*** and Steinberg's ***Cubase Lite*** (see page 70) are two such programs. The second type of program actually creates music in some form. Fractal programs generate music from specific patterns while the likes of ***Band In A Box*** can create a five-part backing.

Feeling Partner is an odd mixture of both types of program in that it combines a 16-track sequencer with a real time arranger which can provide a backing of up to six different instruments – drums, bass, strings, guitar, piano and brass. Select one of the 74 styles of music (from various versions of Rock, Disco, House and so on) and create a track, deciding which instrument the track will be. In this way, you can set up an entire backing track with lead lines and other instruments played in via a standard MIDI keyboard. The actual accompaniment notes created depend on the chords held down on the keyboard.

NEW SEQUENCER FUNCTIONS

The most immediate addition in this new upgrade is that ***Feeling Partner*** will now record MIDI Volume, Pan and Program Change messages created from the mixer at the top of the screen. Select the MIDI function from the box on the left, set a track into record mode and move the faders. All additions can then be viewed and altered from the Track Edit screen. This is a definite plus; changing an instrument's volume and stereo position can add life to an otherwise flat musical rendition. If you use separate tracks for volume and pan, you can monitor the fader changes during playback.

Tracks can now be duplicated and moved within a pattern and also copied to another pattern simply by dragging from the pattern window to the required pattern in the list. To hear any details clearly, a click on the new Solo button isolates the currently selected track.

For live performance, a couple of facilities have been added. Live Chain lets you change patterns by sending Program Change messages from the keyboard you're playing on while the new Note button gives you some control over the way the automatic instruments play.

For those of you who like to get into the nitty gritty of MIDI events, the Track Editor now lets you hide and unhide a particular type of event (good for making Note Off or pitch bend events invisible), and play each MIDI event as it is arrived at.

ARRANGER IMPROVEMENTS

The worst thing about any auto-creation program is being able to hear repetition of various backing instruments. Most of the remaining new facilities are intended to further improve ***Feeling Partner*** in this respect.

The number of recognised chords has now gone up to 15 with the inclusion of suspended 4ths and minor 6ths; Advanced Arrangement alters the normal harmonies created by ***Feeling Partner***; Auto Replace assigns a new style model to a particular instrument. All of these are certainly useful additions.

To get further away from the "this is a preset rhythm playback program" tag, version 1.6 of ***Feeling Partner*** now allows you to create your own drum models with new styles and breaks. This is certainly useful from a creative input point of view – it is also likely to prove to you that your drum fills aren't really up to much!

VERDICT

When ***Feeling Partner*** first appeared on the scene, moans of "oh no, not another accompaniment program" were heard. This is a little unfair as ***Feeling Partner*** has a quality which no other auto-creation program has: it combines a sequencer with a powerful arranger. The price has come down to £149, but ***Band In A Box*** version 5.0 now offers five backing parts, a lead line sequencer, and a host of pre-recorded backing tracks all for £69.

That said, ***Feeling Partner*** is worth considering if you're a live musician who wants backing tracks with something extra and control over their characteristics during live performance. In Issue 1, ***Feeling Partner*** was given an overall rating of 73% – the upgrade scores a little higher. Now all that is needed are some improvements to the sequencing functions to make it a very attractive package.

'H'ide or 'U'n-hide events — LINE+ LINE-

BAR	/	4	384	STATUS	CH	-1-	-2-	LEN	CHORD	TYPE
1	1		0	NOTEON	3	D#4	50	340	C m	11
1	1		0	NOTEON	3	C 4	74	341		
1	1		0	NOTEON	3	G 3	74	347		
1	4		52	noteoff	3	D#4	64			
1	4		53	noteoff	3	C 4	64			
1	4		59	noteoff	3	G 3	64			
1	4		60	CONTROL	3	123	0			
2	1		0	NOTEON	3	D 4	70	358	G m	11
2	1		0	NOTEON	3	G 3	68	355		
2	1		0	NOTEON	3	A#3	64	354		
2	4		63	CONTROL	3	123	0			
2	4		66	noteoff	3	A#3	64			
2	4		67	noteoff	3	G 3	64			
2	4		70	noteoff	3	D 4	64			
3	1		0	NOTEON	3	D 4	66	673	D m	11
3	1		0	NOTEON	3	A 3	78	671		
3	1		0	NOTEON	3	F 3	74	666		
4	3		90	noteoff	3	F 3	64			

The Track Editor shows all information about each MIDI event; the new Hide/Unhide facility is useful for removing Notes Off from sight.

Powerful arranger functions

Real time recording of, and control over, volume and pan

Will save and load in MIDI File format

PROS AND CONS

Sequencer side not fully featured enough to let you work without another sequencing program

Still a little pricey against the competition

"An interesting alternative for musicians who need a computer-based sequencer for live work"

NAME: FEELING PARTNER
COMPANY: MUSIC PRO IMPORT
CONTACT: 081 789 8641

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MIN MEMORY : 1 MB

EASE OF USE	●●●●○
DOCUMENTATION	●●●○○
EFFECTIVENESS	●●●●○
VALUE FOR MONEY	●●●○○

OVERALL **81%**

BUILDING A MIDI SYSTEM

Do all keyboards have sounds on-board? Not necessarily. . .

Last month we looked at how to put together a basic MIDI system comprising a keyboard, an ST and some sound modules. The question is, do all MIDI keyboards have sounds on-board? If you cast your mind back to last month, you'll remember that the competition we ran had a Roland PC 200 GS keyboard among the prizes and this four-octave keyboard certainly doesn't have any sounds. What is the point of this?

Consider what components a standard keyboard is made up of. There's the keyboard itself, some MIDI controls such as pitch bend and modulation wheels and a sound module.

If the sound module on its own costs, say, £300, the keyboard version must cost substantially more. For example, Roland's Sound Canvas SC-55 costs £550 while the closest keyboard equivalent, the JV-330, retails at £799. Admittedly the latter has certain extra facilities, but no doubt you get the point.

MASTER KEYBOARDS

You can see that removing the sound module from the keyboard will lead to a cheaper item. Such a keyboard is usually referred to as a Master, or Mother keyboard and can be used to control various different sound modules by connecting it up as in the diagram. The MIDI Out goes to the MIDI In of the ST whose MIDI Out connects to the first sound module. By using the "daisy-chain" approach of MIDI Thru from one module to MIDI In on the next, various additional synths can be added. The "soft" Thru of the sequencing program running on the ST must be turned on otherwise the MIDI signal from the keyboard will not reach the MIDI In of the sound module.

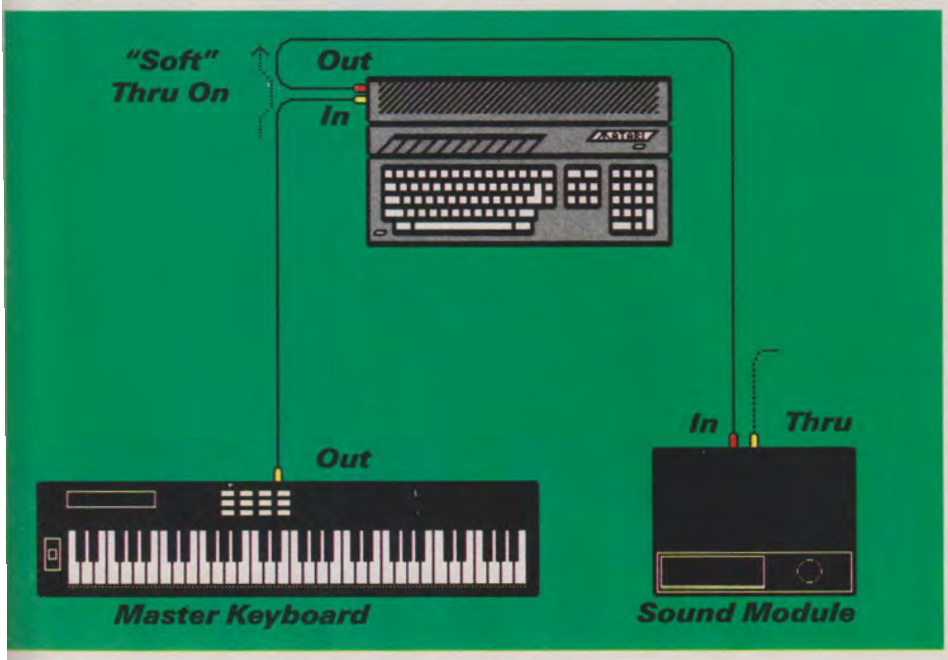
If a Master Keyboard is usually a synth without the sounds on-board, are they actually cheaper? With a few exceptions the answer is generally "no" because such keyboards usually have better MIDI facilities. Another name for these is a Controller keyboard because they often have a plethora of MIDI controls on their front panel beyond the usual pitch bend and modulation wheels. They might have a MIDI Volume slider which transmits special commands to alter the volume of a sound on a synth.

Other facilities such as transpose levers and Program Change buttons are also common. The actual quality and feel of the keyboard is generally better and it will usually have Aftertouch, which means that you have further control over sounds after you have triggered them by pressing a bit harder on the keys. None of these features come cheaply.

So what should you do if you are starting from scratch? Should you choose a synth or Master Keyboard? Depends on how serious you are about your music. Many people who use MIDI never venture further than a single synth and their ST. However, there's a lot to be said for the independence of having a dedicated MIDI control keyboard and separate sound modules. Many synths still don't have "Local Control Off" so the keyboard cannot be separated from the sounds, a necessary feature if you are to get the most out of a synth. As a Master Keyboard has no sounds, there are obviously no problems in this area. Another good reason is that musicians often grow out of the sounds from a particular keyboard and find that they have to tolerate them simply because they like the feel of the keys!

TOO MANY MIDI THRUS

An infamous old myth is that connecting synths and sound modules together via the "daisy-chain" approach leads to MIDI delays. The MIDI data arrives at the MIDI In of the first synth, has to be decoded and then re-encoded to be transmitted from the MIDI Thru. Many people believe that this adds a delay to the MIDI signal. Not true, but the MIDI signal can be adversely affected and a whole host of problems can occur if you are connecting together too many synths in this way. Is there an alternative? Find out here next month!



Connecting a Master Keyboard to a MIDI system is straightforward, but remember to always turn the "soft" Thru on inside the sequencing program otherwise there will be no route for the MIDI information to get from the keyboard to the sound module.

INSIDE INFO

WHY IS MIDI'S FAVOURITE NUMBER 128?

Sounds like the first line from a joke, but it isn't. A little bit of maths. As you may be aware a byte has eight bits, each of which can be a zero or a one. This means that there are 2x2x2x2x2x2x2x2 different values which can be represented by a single byte, which is 256. However, MIDI uses the first bit in any byte to show what type of MIDI event is being dealt with – a Note On or Off, Program Change, Pitch Bend and so on. This means that only seven bits can be used to give the actual value for the event, which allows for 128 possible numbers.

Where does MIDI use this number? Well, there are 128 possible note values, 128 possible MIDI Controllers, 128 possible MIDI Program Changes and 128 different values of Aftertouch. Oh, and 128 different velocity levels.

But there are only 16 MIDI channels? Yes, because only four bits in a byte are used to show the MIDI channel for a MIDI event giving 2x2x2x2 possible values, which is 16.

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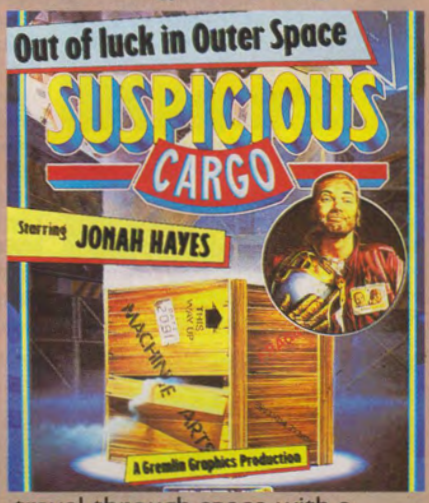

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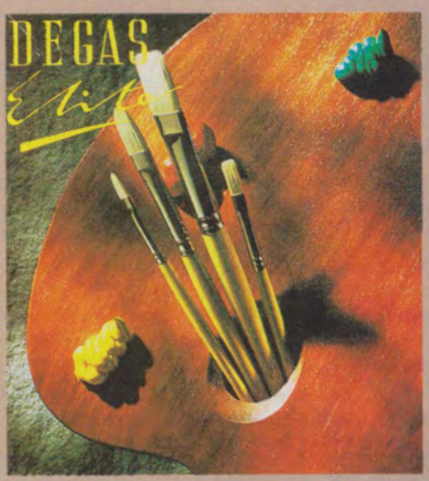

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WHAT IS GENERAL MIDI?

Ever wondered about the "GM" logo that Roland, Yamaha and Korg have all added to their keyboards and sound modules? Now what does it actually mean?

Picture this scenario. You've just recorded that lifetime best song on your ST sequencer and want to share it with the local recording studio to get them interested in recording it. The multi-timbral synth you're using is a bit rough, so you decide to turn up at the studio with a disk in hand as you know they use the same sequencer. Off you trot, with aspirations of "that" deal - the big one.

What happens is history. The studio load up the sequencer, insert the disk into the drive, load it in and hit play. The resulting cacophony could hardly be described as music: that great piano line is now being played by a tuba while the background strings sound like distorted rock guitar. The bass drum sounds like a triangle and the hihat like a cowbell. Two hours later you're still sitting at home wondering what went wrong.

A multi-timbral synth can play many different sounds at the same time. MIDI uses a special message called Program Change to select different sounds for each part. And this is where the problem lies: the Program Change numbers needed to call up a particular sound differ from synth to synth. For instance, one synth might have sound #10 as solo trumpet while another has double bass in its place.

Where percussion is concerned, the situation is worse. Each percussive instrument is usually assigned to a different note on the keyboard; a typical "mapping" might be C1 (bottom C on most five octave keyboards) for the bass drum, D1 for the snare drum and so on. But not all manufacturers follow the same mapping, which leads to a mis-map of your sounds and musical chaos.

MIDI manufacturers in America and Japan have created the General MIDI System (GM) to solve this problem. The 128 sounds called up by Program Changes are listed as is the keyboard mapping for percussion instruments, for which MIDI channel 10 must be used. Other features include 24-note polyphony and the ability to playback up to 16 sounds at the same time.

Roland's GS format is similar to GM. Sound Canvas SC-55 has been a best-seller for over a year and has spawned a host of new keyboards and sound modules including the JV-30 keyboard, SC-155 enhanced Sound Canvas module and CM-300 computer music module (we gave away the latter in our competition last month). Yamaha has launched the TG-100, at the bargain price of £349, while Korg's 03R/W also supports GM. Look out for these if you want a sound module which will be compatible with all of the MIDI Song Files being sold by various companies.

Roland's SC-155 has sliders so that you can change volume and stereo pan in real time. It also includes a remote control unit, all for £550.

MODEST MIDI

Having problems with the language of MIDI? Our glossary should help you ...

AFTERTOUCH: Extra pressure brought to bear on the key of a keyboard after it has been initially played. Used to control certain MIDI effects such as modulation or pitchbend. This is often referred to simply as "pressure".

CHANNEL: There are 16 MIDI channels, each of which usually accomodates a different sound. For instance, Piano may be on MIDI channel 1, bass on channel 2 and so on.

CONTROLLERS: MIDI Controllers can alter the performance of a MIDI synth. For example, Modulation (Controller #1) can add a "warble" to sounds, Volume (#7) will affect the level of the sound and Sustain Pedal (#64) acts like the damper pedal on a piano. Each different Controller has its own unique number.

MIDI: Acronym for the Musical Instrument Digital Interface. Created by American and Japanese manufacturers in 1982.

MULTI-TIMBRAL: Literally meaning "many sounds", a multi-timbral synth plays more than one sound by responding to information on more than one MIDI channel. For example, piano might be on MIDI channel 1, bass on MIDI channel 2 and drums on MIDI channel 10.

NOTES: In MIDI, all notes are numbered between 0 and 127 which gives a total range of over ten and a half octaves. Should be big enough for most keyboards! (a standard piano only has 88 keys)

PITCH BEND: Literally bending the pitch of a note once it has been played. Most synths have a pitch bend wheel to allow you to control pitch bend during a performance.

PROGRAM CHANGES: Usually transmitted from a computer to a synth to select a specific sound. The ST sends a message to a sound module telling it to go to a certain sound.

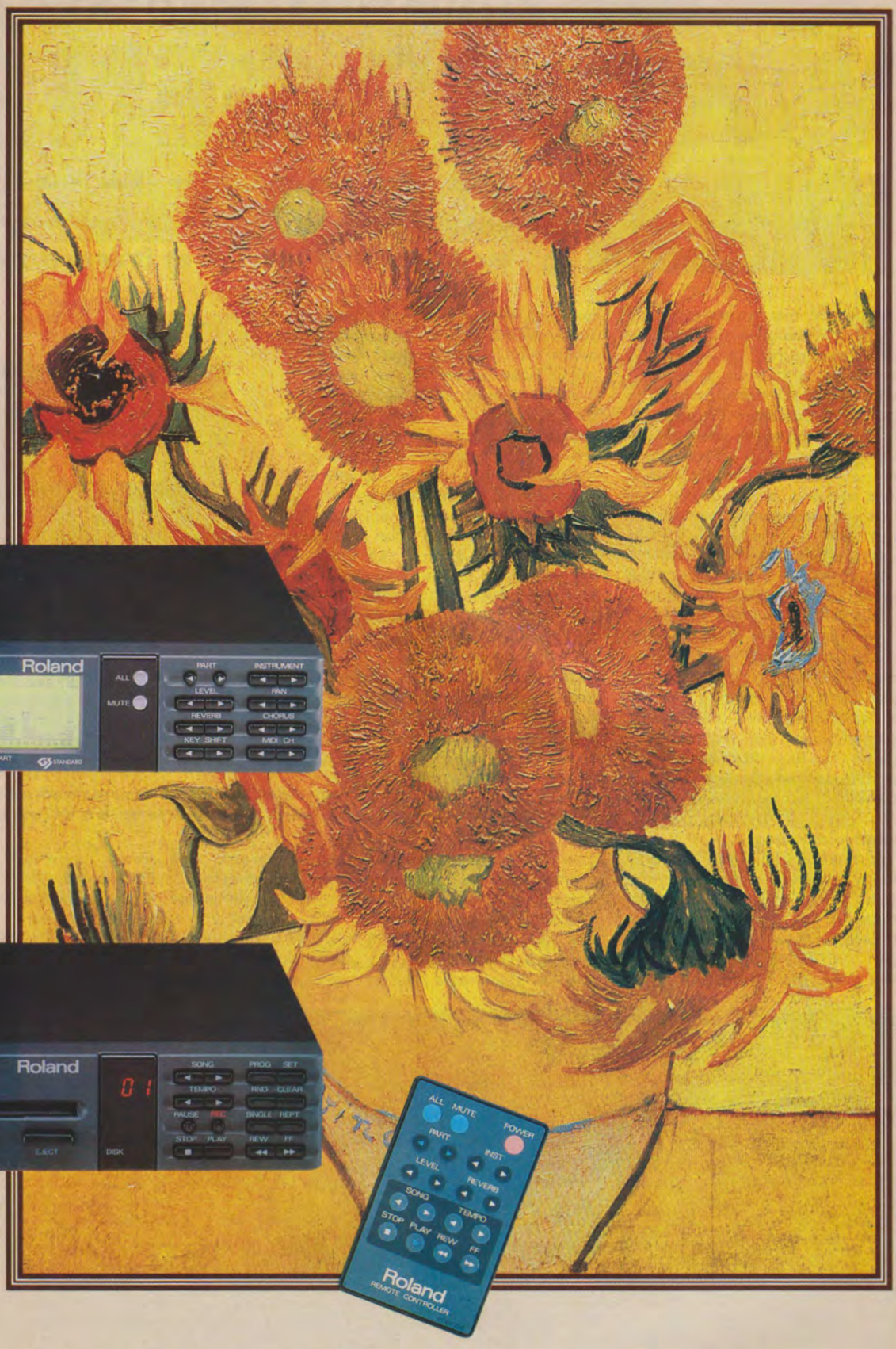
SOUND MODULE: A synth without the keyboard. Usually has a small screen to see the name (or names if multi-timbral) of the sound(s) playing. A sound module may let you edit the characteristics of the sounds, or may simply be a preset sound player.

STANDARD MIDI FILE: Commonly known as a MIDI File, this allows you to create a song on one sequencer, save it and load it into a different one. You can even move song files between different computers.

SYNTHESISER: A sound-creating machine, usually with a keyboard. There are many different types of synthesis although many of the current models use sampled sounds.

VELOCITY: A MIDI Note has a velocity which is a measure of how fast your finger has pressed the key on a keyboard – the faster you press, the higher the velocity value. It is often used by synths to change a sound's volume, but it may also be used to change the tone; for instance, a high velocity could be used on a note to make a piano sound brighter.

Canvas & Brush by Roland



Sound Canvas SC-55
GS Standard MIDI Sound Source
315 sounds, 9 drum kits, 16-part multi-timbrality, 24-voice polyphony, reverb, chorus, and pan. A convenient half-rack design weighing in at only 1.5kg.

Sound Brush SB-55
MIDI File Player
CD-style Remote Control and 3.5" disk drive. Songs created on cumbersome home sequencer setups can easily be converted for live or studio use.

Whether you're sketching out a new idea or remixing an old master the Sound Canvas will allow free rein to your artistic talent. It has a palette of 315 sounds (acoustic instruments to FX and everything in between), plus 9 drumkits, reverb, chorus and pan.

The Sound Canvas adopts the GS Format, which standardises MIDI parameters for Roland equipment, and is also compatible with data prepared for MT-32 and CM-32L sound modules.

Like the Sound Brush MIDI File Player, the Sound Canvas can be operated by remote control; as a portable system the two units are ideal, at a total weight of under 3.5 kg. But most important is the sound. Suffice it to say that anyone with half an ear would go mad for this setup – and it sounds even better in stereo.

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SCREEN SCENE

The football season opens this month with a real fight for top honours...

SENSIBLE SOCCER 80
Something great to come out of the Maxwell empire. This kicks Kick Off senseless...

FOOTY SPECIAL 84
In the ST Review Challenge Trophy, we put eight football giants up against each other.

STRIKER 88
Is this the football game that'll make all other league favourites as sick as a parrot?

UTOPIA – THE NEW WORLDS 91
We check the new, add-on world scenarios.

GRAHAM TAYLOR'S SOCCER CHALLENGE 92
Let the England supreamo loose in the third division. Will he rise to the challenge?

MEGA SPORTS 94
US Gold's timely track and field release covers a multitude of Olympic events and more.

D/GENERATION 96
Excellent strategic blaster from Mindscape.

PUSHOVER 101
Ocean's latest tile-toppling puzzle game

TRADERS 102
It looks cute with cartoon graphics but Linel's strategic trading game is no kids' outing.

HOOK 104
The game of the film of the fairy story. Ocean's first attempt at the adventure genre...

VFM

A new style this month – we're packed with more reviews than ever...

BAD COMPANY 106

EMYLN HUGHES' INTERNATIONAL SOCCER 107

HORROR ZOMBIES FROM THE CRYPT 109

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MOONSHINE RACERS 108

NIGHTBREED 106

PANG 109

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TEAM SUZUKI 106

Sensible Soccer – a game of two halves...

D-Generation – the creations fight back.

Striker – play the demo then read the review.

Traders – looks are deceptive, this is tough!

Hook – adventure for big kids...

It's time to roll back the pages and cast an eye over Screen Scene, where this month we're celebrating the opening of the football season with three new football game releases and ST Review's own football knockout as we put eight great football games up against each other – how do they fare? Turn to page 84 to find out...

For those of you who want some strategy with your gaming why not take a look at D/Generation or Traders? And if you're looking for a bargain then a quick look at VFM will prove to be just right for you.

Our Pros and Cons boxes and Step-By-Step guides give all the information that you need to make the right game purchase first time, every time with Screen Scene. Happy reading!

One of the custom teams supplied with the game. Notice our Steve in goal and our Tom out front!

Two down, and both from Babs Windsor. The score and timer only appear at moments like this.

SENSIBLE SOCCER

Could Renegade really have come up with a Kick Off beater? Tony Dillon finds out. . .

Ever since some reviewers trashed ***Kick Off*** years back, claiming that it was far too unplayable and the graphics much too small, they've never stopped wiping the egg from their faces. The game went on to sell thousands, as did its follow-ups. It wasn't long before the rest of the industry caught the ***Kick Off*** bug, and everyone began making notes, trying to come up with a game to beat it.

We've had license after license, we've had Euro Soccer, World Soccer, Galactic Soccer, top views, side views, 3D views and panoramic views with nice mountains, but still nothing has come close to the excitement of a good game of ***Kick Off*** against a well-matched opponent. All that is about to change, however, with this latest release from Renegade.

Sensible Soccer borrows more than a few ideas from That Game, but this is all completely coincidental. Sensible Software make no bones about the fact that they all think ***Kick Off*** is an amazing game, and have incorporated a lot of its features into their own, adding a few along the way.

TOP OF THE LEAGUE

Like all arcade football games, ***Sensible Soccer*** puts you in charge of a squad of 16 players with the aim to win every match you play by putting the best players in the best positions, and then whacking the ball, knowing that the opposing side is doing exactly the same thing. The skill of each player is only a small matter once you hit the turf, however. It's your skill with the joystick that counts in this game.

But before we get talking about the meat, why don't we take a look at the vegetables. Garnishing this solid rump are a huge amount of options, all of which affect the game you play. The majority of the options are to do with what the game represents, be it a one-off friendly, part of a cup championship or season, or even some professional events like the Nations Cup or the World Cup itself.

CUSTOM MADE

The other options help you redefine the teams in memory, from names right down to the colour of the strip (jersey, shorts and socks), and all disk operations. Speaking of loading, there's a file containing about 60 custom teams on the disk. Would you like to play against the ***East Enders*** cast? Or how about going up against Sensisoft's favourite sandwich fillings? Or even take on the Media XI, featuring our own Steve James in

...and it's there. A sneaky chip sends the otherwise flawless keeper the wrong way!

The corner, like all other set pieces, has loads of in-built formations. Aim it right and the goal is yours for the taking.

You can even decide how many rounds to play when taking part in a cup or league.

goal and Ad Man Tom Glenister up front?

Most importantly, however, and the device that really changes the game, is the weather option. If you have seasonal weather switched on, you can play through the year, with different times of the year giving different types of pitch.

January is more likely to leave you with an icy pitch than July, which more often than not will have you running on hard, dry turf. Switching off the weather leaves the pitch type selectable before each match.

MORE FOR YOUR MONEY

Obviously someone told Sensisoft that more, rather than less, is more. None of your "two-player simultaneous" rubbish here.

In ***Sensible Soccer***, up to 64 players can compete in a league or championship at once. Naturally, you can play with a lot less than that, but it's nice to have the option all the same, just in case you happen to be entertaining the Royal Philharmonic Orchestra one evening and are stuck for something to do.

IMPRESSIONS

The first time you play a match, you'll notice a lot of things. Firstly, you'll see how small the graphics are – far smaller than those in ***Kick Off***, allowing you to see more of the pitch at once. Your first impression will probably be that the small players will hinder the playability of the game, but if this is the case you are certainly in for a pleasant surprise.

The next thing you'll notice is the complete lack of anything else on screen other than the players, the pitch and the ball. No score, no clock and most importantly no scanner. In ***Kick Off*** the scanner served to inform you of where everyone was, helping you judge hefty punts upfield to players off screen. Here, a scanner is unnecessary due to the larger view of the pitch, and so its absence contributes to the uncluttered look of the game. You are here to play football at its most basic arcade level.

TIMELY APPEARANCES

Instead of displaying the score and a timer all the time, they only appear at moments when they won't get in the way – just before a goal kick, for example, or any of the built-in set pieces. This approach works perfectly and stops you getting distracted.

Those of you lucky enough to have one Megabyte of memory will be treated to some pretty neat sound effects. The second disk contains stacks of crowd samples and chants, which change during the game depending on how well the game is going. Along with the customary "Here We Go", there are "WoooAAAAAHHH" as the ball flies toward the goal and "Aaah" as it just misses. It certainly beats a constant roll of white noise, doesn't it?

You only view a section of the pitch at a time, the view window only allowing a sixth of the pitch on screen at a time. The window scrolls around the pitch smoothly, following the ball rather than the players, and you control the player nearest the ball.

ON THE RIGHT TRACK

All other players are computer controlled and follow paths that correspond to their position. From kick off strikers will race forward while defenders drop back, just in case you need them.

The only player that you can't assume full control of is the goalkeeper, who dives and generally carries out most of his duties by himself – the exception to this is goalkicks, where you take over momentarily.

One area where the game definitely scores several points over ***Kick Off*** is the way players stick to their own areas. No longer do you have to watch a long ball sail down the pitch to be recieved by...no-one. Defenders stay roughly in the goal area and attackers stay forward.

COOL CONTROLS

Sensible Software must have been under enormous pressure to get the control system right. The real attraction of ***Kick Off*** was the flexibility of the controls. While hard to master initially, they allowed for some staggering matches – a far cry from the days when you kicked in eight directions and a set distance every time. Unbelievably, Sensible Soccer has actually gone one better.

As before, the players dribble the ball, rather than stick it to their feet. Running in a

Very fast action
Intuitive controls
Good variety of game styles

PROS AND CONS

Computer teams are too hard for the novice
It's sometimes a little hard to tell if you are on the ball

"Finally a game to rival Kick Off. An instant classic"

NAME: SENSIBLE SOCCER
COMPANY: RENEGADE
CONTACT: 071 481 9214

PRICE: £25.99
RELEASE DATE: NOW
MIN MEMORY : 0.5 MB

GRAPHICS	93%
SOUND	93%
VALUE FOR MONEY	93%
PLAYABILITY	93%
OVERALL	93%

INSIDE INFO

Chris Yates and John Hare of Sensible Software won't get too angry if you point out how similar their game is to *Kick Off*. Chances are they'll agree with you. Both are dedicated *Kick Off* fans and admit to using it as the basis of their own game. As well as the removal of the scanner, Sensisoft added some moves they felt should have been used but hadn't up until now, like bicycle kicks and banana shots.

straight line is easy enough, but try turning while running full pelt, and the ball will carry on in the same direction while you race away from it. Learning to dribble is definitely an acquired skill.

A little easier to get around is the kicking control. A single tap on the firebutton will pass the ball directly forward, unless there is a player in that general direction, in which case the ball will be passed towards them. Holding down the firebutton lays on a full kick, and this is where the clever bit comes in. By quickly changing the joystick direction after holding down the firebutton, you can select the type of kick, from lobs to curlers, and getting the hang of these leads to some really satisfying football. There can be little that will equal the ego-swell of a ball curling in from the sideline at an impossible angle.

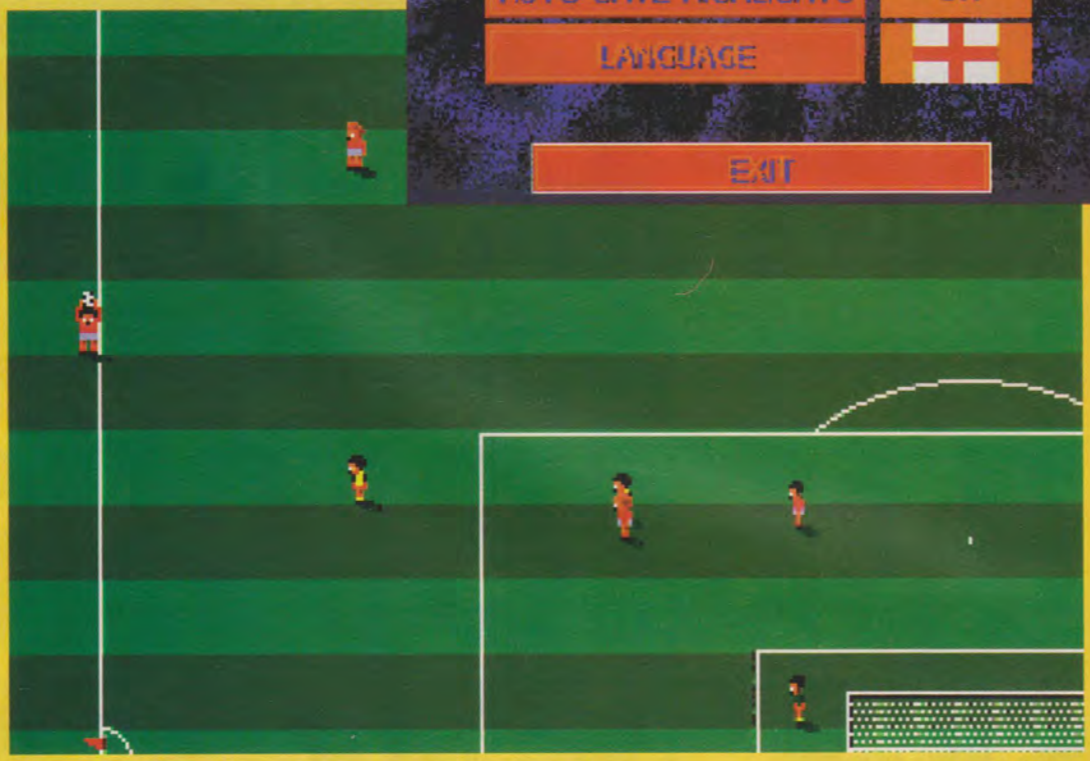
NOT EASY

But playing ***Sensible Soccer*** isn't easy, especially if you are used to the control system in ***Kick Off***. Although there are only a few differences in the playability, they are enough to warrant a completely new way of playing. You can't "lock" the players by pressing fire when they are close to the ball. Pressing fire when a player is off the ball always results in a sliding tackle or diving header, depending on the position of the ball in relation to the ground.

I'm sure that most ***Kick Off*** fans will stick to what they know, which is a shame because it's rare that a game as good as this comes along. Playing solo it's a lot of fun, even though the computer teams leave little room for error. Playing with someone else pushes it way out in front, leaving you with a game you can't get bored with.

Just some of the multitude of options for you to alter the style of game.

The reality of the game continues even when the ball leaves the pitch with full action throw-ins...



Selecting the teams for the cup. A 'P' means the team is under human control and a 'C' is under computer.

Below: Try to beat Graham Taylor and choose the right team for an England friendly.
Below Right: Well, a no-score draw is better than a loss, but is it better than Graham would have done?

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SICK AS A

With the new football season almost upon us, Gordon Houghton checks out the title contenders in the ST Super League

Computer soccer has a chequered history, as anyone who ever played ***Gazza's Super Soccer*** will tell you. The coin-op footy game is as old as the arcades, arguably stretching back to ***Pong*** (where you defended a "goal") and ***Atari Football*** (the first "true" footy simulation). Coin-ops have included such gimmicks as foot pedals (Sega's ***Kick 'n' Run***), paddles, compulsory fouls (SNK's ***Fighting Soccer***), and four-player action.

The ST's list of footy games is as long as your arm (and began in 1987 with Microdeal's impressive sideways-scrolling ***International Soccer***. Most of the games since then have been released to coincide with the World Cup in 1990 and the recent European Championships. Few of them are worth the disks they are written on.

TAKEN IN VAIN

The player licences come out the worst – among those probably best forgotten are ***Peter Beardsley's International Football***, ***Kenny Dalglish's Soccer Match***, and games based on Gary Lineker, Paul Gascoigne and Roy of the Rovers. It's usually been the non-licensed games which have become classics: ***Kick Off***, ***Kick Off 2***, ***Sensible Soccer***, ***Player Manager*** and ***Tracksuit Manager*** all give a good knockabout for the money. The only major exceptions are Krisalis' ***Manchester United*** licences, and the bizarre CDS "board game", ***Brian Clough's Football Fortunes***.

There have only been three styles of presentation in all the 40 or so soccer simulations. You probably already know about the overhead-scrolling style, popularised by ***Kick Off***, and the sideways-scrolling version in use from ***International Soccer*** onwards. But does anyone still remember Micro Style's 3D vector graphics footy game, ***International Soccer Challenge***?

If not, don't worry, because over the next couple of pages we present the ST Cup Winner's Cup, in which eight popular games battle it out to discover which is the greatest soccer sim of all...

International Soccer.

International Soccer Challenge.

Kenny Dalglish's Soccer Match.

Activision's Fighting Soccer.

US Gold's Italy 1990.

THE TEAMS

Here's a rundown of the teams taking part...

EUROPEAN FOOTBALL CHAMP
Domark, £25.99

KICK OFF
Anco, £19.99
Was also available on the World Cup Year 90 compilation from Empire, and now on a number of other compilations.

KICK OFF 2
Anco, £19.99
Also available on a range of compilations.

JOHN BARNES EUROPEAN FOOTBALL
Krisalis, £25.99

MANCHESTER UNITED
GBH, £7.99

MANCHESTER UNITED EUROPE
Krisalis, £25.99

MICROPROSE SOCCER
Kixx, £7.99

SENSIBLE SOCCER
Renegade/Mindscape, £25.99

SENSIBLE SOCCER (3) – JOHN BARNES EUROPEAN FOOTBALL (1)

A tough early test for the tournament favourites saw ***Sensible Soccer*** overcome the silky skills and fleet-footedness of ***John Barnes*** with a second half rally. ***Barnes*** took an early lead with some impressively swift scrolling routines and an unparallelled set piece customisation facility. The ***Sensible*** team could only stand and stare as a complex series of programmable free kicks, diving headers, a European tournament format, action replays and aftertouch gave the underdogs the advantage at half time. ***Barnes'*** one major weakness – the inability to see a larger area of the pitch – prevented a heftier scoreline. In the second half it was a different story, as ***Sensible Soccer*** realised that it, too, was a class act. Showing off its own impressively smooth scrolling, cute player graphics, and the most comprehensive team edit facility in existence, the Sensibles hammered in three goals to seal the game.

Out in the first round but not disgraced: John Barnes European Soccer.

OVER

PARROT,

MICROPROSE SOCCER (0) – MANCHESTER UNITED EUROPE (5)

Microprose Soccer only reached this stage of the tournament thanks to a couple of byes against now-defunct opposition, so the humiliating scoreline wasn't entirely unexpected. Unlike its 8-bit counterpart, ***Microprose Soccer*** failed to come up with any championship-winning qualities. It played like a brick in both halves, with annoying delays as control switched from one player to the next, manually controlled goalkeepers failing to stop an avalanche of goals and a pathetic computer opponent.

The curling banana kicks promised much initially, but even they didn't pose any serious problems for the ***Man Utd*** goalkeeper. ***Manchester*** cruised through the game and managed to score four goals in the first half and one in the second.

A combination of five cup competitions, aftertouch, a four-player option, player statistics, a save game facility, good manual control of goalkeepers, arcade and management-only options and smooth scrolling, all proved too much for the opposition.

Microprose Soccer falls at the first hurdle against the Mighty Reds.

KICK OFF (4) – MANCHESTER UNITED (1)

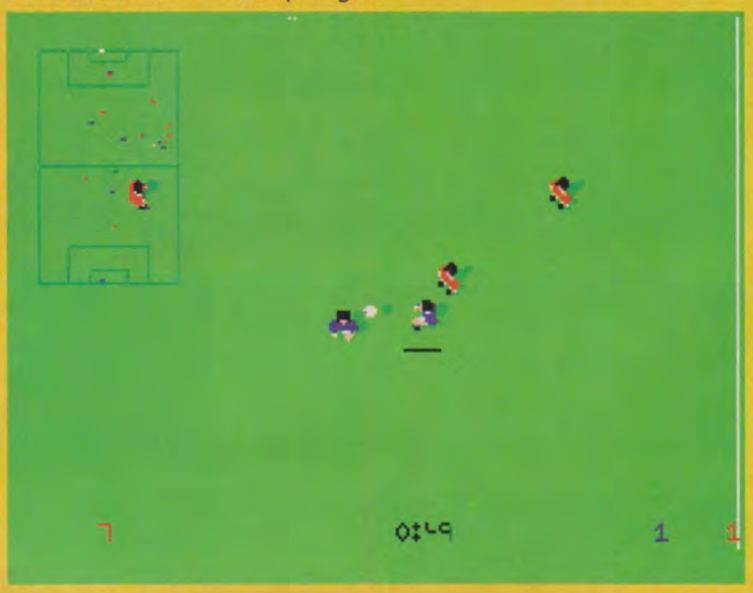
Both these teams are past their prime but their different styles still managed to provide a good deal of entertainment.

Manchester United impressed from the beginning with a reasonable management section, including transfers, team selection and tactics, injuries, suspensions, training and league tables, and they were rewarded with a goal late in the first half.

Unfortunately, the side was let down a little by the arcade section, with its relatively slow scrolling, poor graphics, weak control system and clumsy computer opponents.

Kick Off s contribution was a couple of goals either side of half-time – these were thanks to a great control method, five game speeds, variable match lengths, innovative on-screen radar, a variety of referees, decent sound effects, excellent computer skills, practice options and an international league tournament.

The old team still manages to produce some great results even after almost four years in the spotlight.



Kick Off – the first of the great overhead scrollers.

INSIDE INFO

Football – or soccer, as the Americans call it – probably began in the Middle Ages, when the first centre forwards played the game with the severed heads of criminals. The first recognised 11-a-side match using an inflated bladder was in 1863, when the Old Etonians played the Old Harrovians.

Football stayed with the public schools for most of the rest of the 19th century. An embryonic FA knocked up a few rules in the 1860s and '70s, and the Football League made its debut in 1888, with just 12 teams. Since then, the most successful team has been Liverpool, who have won 17 titles.

Notable events in the last century have included the first World Cup (held in Uruguay in 1930) and, closer to home, the abolition of the maximum wage in 1961 – before then, footballers earned a maximum £20 a week.

However, some parts of the game still remain firmly rooted in the past. Did you know that if the crossbar is broken during a match, it can be replaced by a rope? Or that players aren't obliged to wear boots or shoes? Perhaps a barefoot Premier League isn't such a bad idea...

THE MOON

EUROPEAN FOOTBALL CHAMP (1) – KICK OFF 2 (2)

The young pretenders faced Anco's experienced squad in a classic confrontation: side-on scrolling versus overhead, coin-op conversion versus original game. ***Kick Off 2***'s qualities are well documented: until this tournament it was the undisputed king of soccer sims, with masses of options, including a four-player head-to-head, a superb control method that allows you to do just about anything you want, and a kit designer which you can use to create almost every club strip from Blackburn Rovers to Wycombe Wanderers. Domark's sole entry into the competition was a bit of an unknown quantity: Taito's coin-op is a reasonably popular kick 'n' trip version of the sport, but not all conversions are faithful to their arcade parents. This one is a decent attempt featuring one- and two-player options (with a two-player co-operation mode), nine different international teams, variable match length, and five skill levels. The game itself boasts nine types of shot (including bicycle kicks and diving headers) in eight directions, Gazza-style fouls (if the ref's not looking), a pitch scanner and innovative zoom mode. Which all sounds very impressive... but isn't. The scrolling is pretty poor, the computer goalies have greased gloves, the player selection system is unfriendly, and there are annoying presentation delays in the action. Good for a goal, but not much more – so it's an early bath for Domark.

Domark's conversion of the popular Taito coin-op, European Football Champ.

SENSIBLE SOCCER (3) – MANCHESTER UNITED EUROPE (2)

The first semi-final pitched the overhead scrolling skills of ***Sensible Soccer*** against the best of the side-on scrollers, ***Manchester United Europe***. Manchester threw up a few early surprises, displaying all the qualities they showed in the quarter finals and adding a host of others, including player numbers on shirts, 170 club badges of the major European teams, one-touch football, yellow and red cards and penalty shoot-outs. They gave the favourites a fright and managed to sneak a couple of goals midway through the first half. After a sluggish start, the Sensibles again got their act together and scored a second half hat-trick with the help of 100 European teams, the ability to design your own cup tournament and named scorers. On this display, it looks as if no-one can stop them.

Manchester United enter Europe but can only make it as far as the semi-finals here.

KICK OFF (2) – KICK OFF 2 (3)(AET)

The former giants of football simulation played out an intense local derby before a capacity crowd of three. In the first half, the original ***Kick Off***'s superlative, silky skills on the ball, its huge range and variety of passes, the quality of the computer opponents, cute graphics, thundering shots and neat sound effects combined to give it a 2-0 advantage by half-time. During the interval, however, everyone realised that ***Kick Off 2*** had all these features as well, and the successor to the greatest ST footy game of three years ago soon levelled the match at 2-2. When the final whistle blew, everyone thought the game was heading for penalties, but ***Kick Off 2***'s aftertouch facility, its four-player option, kit designer, World Cup 90 competition, variety of playing surfaces and weather conditions, and over a dozen different referees, allowed it to sneak a winner with just seconds remaining.

A big hand for the runners-up, Anco's Kick Off 2.

THE CUP FINAL

SENSIBLE SOCCER (2) – KICK OFF 2 (1)

The similar playing styles of both the finalists could have resulted in stalemate and the agony of a penalty shoot-out. Instead, these two teams produced the most entertaining match of the tournament. In the first half both teams impressed with the stylishness and character of their graphics, varied playing conditions, set pieces, aftertouch, data save facilities and kit designers.

Sensible scored with its excellent sound effects, player names editor and subs bench, and ***Kick Off 2*** replied with a wide range of options, simultaneous four-player facility and built-in World Cup tournament.

The second half saw a battle between equally intuitive control methods, and in the end the differences between the sides were minor. Sensible shaded the tie with its ability to see more of the playing area (making passing and shooting easier) and a host of extra features, such as advice on opposing teams, up to 64 players participating in cup competitions, and a huge range of league and cup tournaments.

It was a close-run thing, but ***Sensible Soccer*** is now, officially, the king of ST soccer simulations.

The champions!

LATE ARRIVALS

Those companies which failed to put together a team in time for this year's competition include Rage (with Striker), Domark (Championship Manager), and Grandslam (Liverpool Football). We'll never know just how great or gruesome they were... unless you spot them in the review pages.

BUYERS GUIDE

There have been over 40 football games on the ST, most of them now lost forever. This is a league table of the top 10 currently available.

	Gra	Sou	Cha	Eas	Atm	Pla	Com	Overall
1 Sensible Soccer	9	9	9	9	9	2	9	93%
2 Kick Off 2	9	8	9	9	8	4	9	91%
3 Kick Off	8	8	8	9	7	2	9	86%
4 Player Manager	7	3	9	8	6	1	8	84%
5 Man Utd Europe	7	4	8	6	6	4	8	82%
6 Graham Taylor	7	4	7	8	7	1	7	80%
7 John Barnes	7	5	7	7	5	2	7	78%
8 Manchester Utd	7	5	7	6	6	1	5	72%
9 Euro Football Champ	6	6	7	5	5	2	5	67%
10 MicroProse Soccer	6	6	5	4	6	2	3	40%

Key: Gra = Graphics, Sou = Sound, Cha = Challenge, Eas = Ease of use, Atm = Atmosphere, Pla = Number of players, Com = Computer opponent skill

ARMCHAIR MANAGER

Management games have proved almost as popular as their arcade counterparts, with over a dozen featuring the strategic side of football

The earliest of these was Addictive's ***Football Manager***, a simple tactical game which allowed you to run the club's finances, transfer players and pick a team; its successor added a bit more depth and a crude, arcade-style "highlights" section.

Since then there have been two types of management game. The pure strategy games, including Goliath's excellent ***Tracksuit Manager*** and a host of decent mail order releases from companies such as CDS and D&H, incorporate everything but the match itself. The latest on the scene is Krisalis' ***Graham Taylor's Soccer Challenge***, which comprehensively charts his rise from lowly League Manager to head honcho of one of the first round wallies in the European Championships.

Arcade fans, however, will be keener to sample releases such as the original Manchester United, with its balance of arcade action and wheeler-dealing. The best of this bunch is Anco's ***Player Manager***, which features a basic game of ***Kick Off*** and a huge number of tactical options which would keep even Brian Clough happy. Nothing has touched it in the last two years – but with Domark's ***Championship Manager*** and US Gold's ***The Manager*** in the pipeline, the situation may change...

STRIKER

ATARI ST REVIEW
ESSENTIAL BUY

Football simulations tend to flood the shops every two years, to coincide with the World Cup or European Championships. Most of them are not worth the price of a ticket to a Vauxhall Conference match, but a few come along from nowhere and play the opposition off the park. ***Striker*** is such a game. It joins ***Kick Off***, ***Kick Off 2*** and ***Sensible Soccer*** (see the review on page 80) among the elite.

It doesn't look all that impressive when you load it up. There's a demo mode (with random teams), a seedings table (detailing the 64 international sides featured in the game), and a choice between Friendly Match or Tournament. Nothing like ***Kick Off 2***'s kit designer, or ***Sensible Soccer***'s multitude of leagues and cups.

UP FOR T'CUP

Whether you play a Friendly or take part in the Tournament doesn't really matter. You still choose which of the teams you want to control, from Canada to Brazil, and the options are virtually the same. Naturally enough there's a two-player mode, but should you be playing alone, the intelligence of the computer opponents is very good indeed. Beginners or young children should play Germany against Qatar. More skilled players will fancy a repeat of the 1978 World Cup Final, Argentina versus Holland.

The Tournament itself is a simple knockout affair, usually beginning with relatively humble opponents. You won't reach the final on your first go, or even your tenth – unless you're very lucky.

DECISIONS, DECISIONS

Before you even get to the match though, there are a fair number of decisions to be made. ***Striker*** doesn't boast quite as many options as ***Kick Off 2*** or ***Sensible Soccer***, but its range is impressive nonetheless.

For a start, there's the Formation Designer. This handy screen allows you to select eight different tactical set-ups, from the astoundingly defensive 5-4-1, through more usual systems such as the 1-4-3-2 (sweeper), to the all-out suicidal attack of 2-3-5. You soon learn to match the formation to the opponents. Anyone playing an attacking line-up against the Germans is likely to end up on the wrong end of a thrashing.

The Settings Menu is laid out ***Kick Off***-style and offers eight options. There are five wind strengths (from no wind to the amusing gale-force), four wind directions, three types of surface (dry, damp and soggy), an icon to turn the pitch markings on or off (which makes the action smoother), five match lengths (from two to 20 minutes each way), variable extra time periods (from no extra time to five minutes each way), action replay on/off, and five different control methods – Easy, Normal, Skilful, Computed and Loose.

KICK OFF

When you're happy with the options, it's time to march boldly from the changing rooms and take your position on the field. The action is viewed from a "camera" position above the pitch and a little behind the run of play. This view can be scrolled in four directions using the cursor keys, and an on-screen scanner is used to give an overall view of the pitch.

However, it's the ball control system that makes ***Striker*** so impressive. The five meth-

Free kicks and goal kicks are easy as pie. Just set the direction and length using that dotted line, and press the fire button.

INSIDE INFO

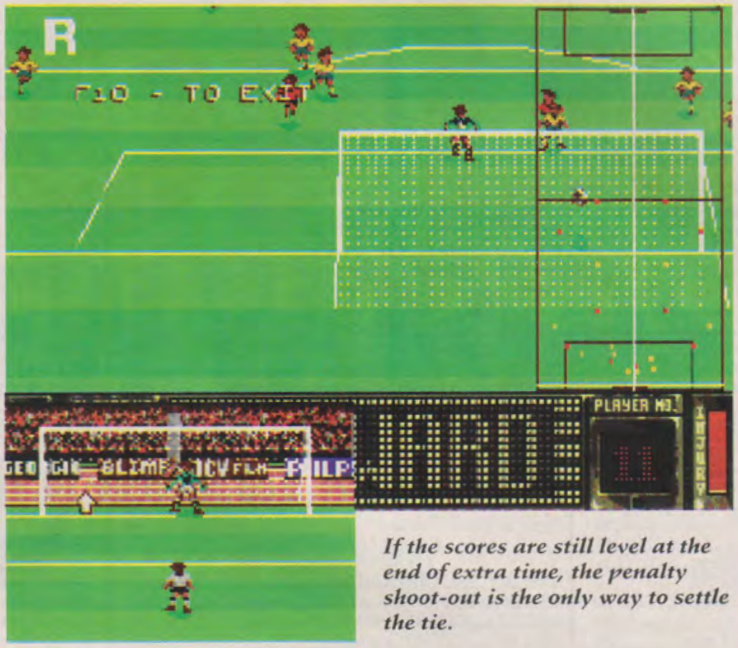
Until they decided to go it alone at the end of 1991, Rage Software used to be known as Special FX, and most of their work was produced for Ocean. Their very first project was *Firefly* on the Commodore 64 back in 1988, but in the past four years their ST output has included *Robocop 2*, *Hudson Hawk*, *The Untouchables* and *Midnight Resistance*. *Striker* is their first release as an independent company, and the game has already received rave reviews on the Amiga. MD Paul Finnegan supervised *Striker*'s progress, but the spade-work was done by George Christopherorou (programming) and Andy Rixon (graphics). There are no new game plans at the moment, but the team is hoping to produce a version of *Striker* on Atari's wonder machine, the Falcon.

STEP BY STEP

1 ***Striker has 64 teams to choose from, from lowly Qatar to world-class opponents such as Germany, Brazil and Italy. England are seeded fourth which, considering their performance in Sweden, is perhaps on the generous side. But what are Yugoslavia doing there?***

2 ***The Formation Designer allows you to change the team tactics to any one of eight predefined patterns, and even alter the substitute's preferred playing position! After checking out the game Settings (another menu), it's time to play...***

Gordon Houghton laces up his boots and discovers that this is NOT just another run-of-the-mill footy game



If the scores are still level at the end of extra time, the penalty shoot-out is the only way to settle the tie.

Automatic action replays can be selected from the Settings Menu. Alternatively, a simple key-press will replay the last 10 seconds of the action during the game.

ods mentioned above are a genuine innovation. Beginners should stick to Easy control, since the ball sticks to your feet almost permanently; after that the ball becomes less and less easy to hold onto, until you reach Loose method. This plays a little like ***Kick Off***, in that you must force possession on the ball. In addition, no modern footy game worth its isotonic post-match refreshment can do without Aftertouch. ***Striker*** obliges, allowing you to bend and dip the ball after you've kicked it, as well as packing in a mean piledriver shot.

Set-pieces are a further innovation. Corners, throw-ins and kicks from the goalie's hands are unremarkable events, but free kicks and goal kicks can be adjusted to a fine degree.

Using a dotted-line cursor, you can alter the length and direction of your kick and, in conjunction with the on-screen scanner, hit a pin-point pass or shot. Add to these features the ability to perform fancy skills such as sliding tackles and overhead kicks and you begin to realise just how flexible the control system is.

PLAY IT AGAIN, GAZZA

Action replays are Striker's third major success. Automatic replays are normally activated after a goal, but you can watch any part of the action again at any time. Once the replay is in motion, you control it using nine video functions: play, pause, rewind, fast forward, fast rewind, slow forward, slow rewind, advance one frame, and regress one frame. The comprehensiveness is impressive.

Apart from the technical innovations, almost everything you would expect from a computer football match is included here. The ref is usually in a good mood, and will only book or send off players where he sees fit, substitutes occur when players get injured, and if games aren't settled by the end of extra time, a tense penalty shoot-out takes place. Very little has been omitted.

In fact, ***Striker*** has only a couple of drawbacks. There's no kit designer, which means that you can't create your own favourite team, be it Blackburn Rovers or Dynamo Kiev. In addition, there's no save-game or save-replay facility, which makes playing a 20-minutes-each-way tournament a bit of a chore. Either of these problems on their own wouldn't be too bad, but both combined takes a little of the shine off what is otherwise a superb game.

Even with these minor niggles ***Striker*** is one great footy simulation. The graphics are great, with fast, smooth scrolling and loads of animation, the sound (mainly crowd chants, whistles and kicking noises) is respectably functional, and the whole game is neatly presented. The 3D viewpoint is also a refreshing change from the wave of overhead- and sideways-scrolling footy games around right now.

Just one more thing. Don't force yourself to choose between this and ***Sensible Socce***r. The games are different enough to justify saving up and buying both.

"An innovative and beautifully designed footy game"

NAME: STRIKER
COMPANY: RAGE SOFTWARE
CONTACT: 051 707 2280

PRICE: £25.99
RELEASE DATE: NOW
MIN MEMORY : 0.5MB

GRAPHICS	5
SOUND	4
VALUE FOR MONEY	5
PLAYABILITY	5

OVERALL **90%**

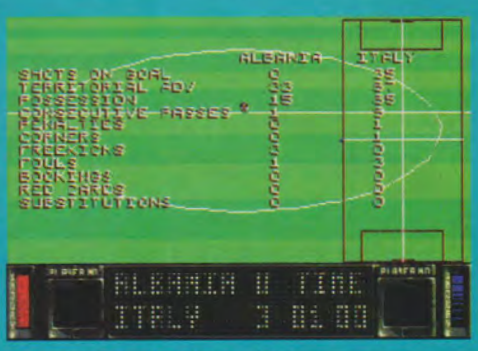
PROS AND CONS

Great graphics
Instant replays
Intuitive controls
Smooth scrolling
64-team tournament
Intelligent opponents

No disk save options
No kit designer

3 ***Kick off! There are plenty of options available for the match itself. You can alter the game length to suit your taste – anything up to 20 minutes each way – you can switch off the pitch markings, change the formation, and view the teams' statistics.***

4 ***A skillful dribble on the left wing, a low cross, and the centre-forward hammers it home. It's a goal! Now it's time to indulge yourself by watching the action replay over and over and over again. Pity it can't be saved to disk, though.***



5 ***The final whistle. After the match, you can review both sides' vital statistics, including their possession and territory, shots on goal, corners, bookings, consecutive passes, and so on. Jimmy Hill eat your heart out.***

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UTOPIA
THE NEW WORLDS

Gremlin brings you some new locations for its smash God sim, Utopia. Tony Dillon packs his bags and takes himself off to pastures new. . .

Calm down everyone, it isn't the sequel. Yes, the title does suggest that it's the follow-up, but ***The New Worlds*** is in fact an expansion disk for the existing ***Utopia*** system, giving you 10 new backdrops to play against.

In Utopia you have to develop a small civilisation into a powerful one by developing the cities, in much the same way as ***Sim City***, while keeping the people happy and defending them against a hostile opposing force, as is the case in ***Populous***.

The original gave you 10 different worlds to work your way through, each getting progressively harder. Not that you had to play them in any order, you understand, except to say that novice players probably wouldn't last five minutes from about the fourth world onwards. Even so, 10 worlds is a finite amount of variety, so Graeme Ing, the genius behind the classic, has come up with 10 new worlds, with differing graphics, world statistics and very different opposition.

Once again the enemies are graded, only rather than carry on from where the original left off, ***The New Worlds*** takes a step backwards and starts from about level three. This is to ensure that someone who isn't incredibly good at the former will gain enjoyment from the latter.

VARIETY

The variety within these 10 worlds is quite astounding. With most games of this genre, you would expect nothing but a change of palette to imply a change of locale, but in this case you would be wrong. Each world has been designed as a complete entity, with different themes and strategies required – there are even some that you wouldn't have needed in the first title. For example, one world is simply a collection of small islands connected by vast stretches of swirling mist, and until you develop a spaceship you have no hope of expanding.

On top of that, you have a world run by robots. The natural rocky terrains favoured on most levels is replaced by a polished steel floor, and the small but deadly robots are more than a match for your run of the mill tank. On other levels there are ancient ruins, along with massive forests and many other forms of natural terrain.

Playing ***The New Worlds*** is no different to playing the original. Of course, you are now faced with stacks of variety. Yes, you now have 10 more forces to oppress, but there is nothing staggeringly new. This is a must for fans of the original, as it does take it a little further, but if you are a casual participant, then you're probably better off waiting for the sequel.

A barren landscape, littered with smooth rocks. Someone's had a try at ploughing it by the looks of things.

One of the most outstanding new graphic features are the ruins. Who knows who existed before you?

INSIDE INFO

The New Worlds may not be the sequel, but ***Utopia 2*** is going to happen very soon indeed. At the time of writing, it has been in development for around seven months and promises to give existing players a real run for their money. Gremlin has taken full note of all the criticism levelled at the original and is building a game that people really want to see.

The *Sim City* aspects of the game will take a less major role this time around, although this feature will still be fully implemented. The sequel will be more biased toward the military side, giving you more freedom to fight rather than play the part of a town planner.

Although we have no official specifications as yet, one new feature that will be implemented is a bigger map, letting you see the enemy at all times, rather than have them crawling on screen. You'll hear more when we do.

PROS AND CONS

A lot of variety
Well staggered difficulty levels

Doesn't add anything new to the game
At the price, only fanatics need apply

"Nothing new. Should satisfy fans for now. . ."

NAME: UTOPIA – THE NEW WORLDS
COMPANY: GREMLIN
CONTACT: 0742 753423

PRICE: £14.99
RELEASE DATE: NOW
MIN MEMORY : 0.5 MB

GRAPHICS	★★★★☆
SOUND	★★★☆☆
VALUE FOR MONEY	★★☆☆☆
PLAYABILITY	★★★★☆

OVERALL 73%

GRAHAM TAYLOR'S SOCCER

Graham Taylor has worked his way from the fourth division to become the manager of England. Garth Sumpter hasn't yet – but now at least he has the chance...

Graham Taylor knows that when he's got a winning formula he should stick to it. This tactic has certainly been taken to heart by Krisalis, who have so far enjoyed big league successes with their previous arcade/simulation football games, ***Manchester United***, ***Manchester United Europe*** and ***John Barnes' European Soccer***. Now finally, ***Graham Taylor's Soccer Challenge*** takes the titles' programming team, Teque, one step further into the realms of a pure, football management simulation.

ROAD TO WEMBLEY

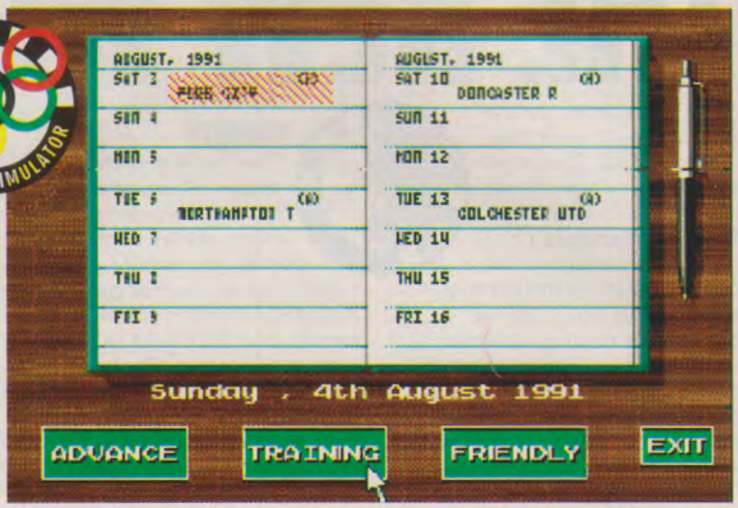
The game will only run on one Megabyte machines and is supplied on two disks, but there is thankfully no disk swapping involved as disk two deals exclusively with the International part, which you can only graduate to once your team has finished a season in a top five position and you have taken the position of England manager.

KICK OFF

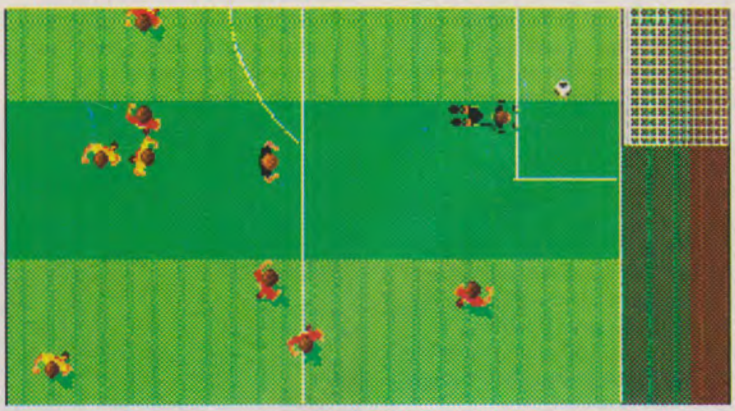
The road to Wembley has humble beginnings, though, with job offers from third division clubs. After choosing one to manage, you sit down with the objective of taking the team to the top of the division and perhaps even winning one of the trophies that are up for grabs in your first season.

Each team begins the season with a full squad of players and a full complement of apprentices, all of whom will come under your leadership. You run the team and club, using a desk diary which is accessed from a main menu, to set training schedules and to see what games you have coming up in each week.

From the office, you can also access your status – a personal record of your managerial career up-to-date; what your history is, clubs managed, cups won and, with any luck, all the division promotions attained.



All immediate games are shown in your manager's diary. You must choose which days you will make the team train and click on advance to move to each successive day.



You can opt to watch matches – useful for assessing both your own team and the others. The games even provide some drama as well, as shown by this magnificent goal!

THE TEAM

The real action however, lies behind the player icon where several sub-menus give you access to the actual game. From here, a managerial eye can be cast over a wide range of topics, including Trainees, Transfers, Scouts, Injuries, the current Squad and their medical records and even over each of the squad's current contracts.

In addition to your squad, the club also has a team of trainees. They all begin their careers aged under 16 and are trained alongside the other players in the hope that their skills will improve to the point where they will be offered contracts to join the main squad. There are options on this screen to recruit new trainees, offer contracts or to release them from their apprenticeship. Once they reach the age of 17 you must decide if you want to keep them.

SCOUTS

Managers have two scouts – both of whom should be utilised each turn, as they are invaluable in getting reports both on teams that you are due to play and on individual players. When used after looking at what's happening in the transfer market this latter function can help you to build an international class team. Each scout will compile a report as soon as possible (but remember that you can't get information on a team or player out of season).

PRACTICE MAKES PERFECT

One of the real cruxes of succeeding in your rise through the divisions in the game lies in getting the training for your team right. Players really should be trained at least four times a week, and it is generally far more beneficial to use the team training option than opting to train a single player.

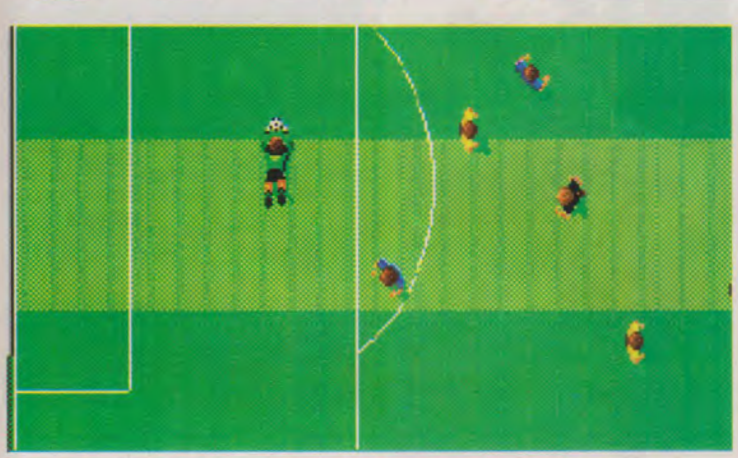
Sometimes, however, you will train an individual – usually to try to strengthen an area of weakness noticed when browsing through his characteristics. To do this when in the training menu, click on the individual player option, then choose the skill that you want to concentrate on. That player will then be coached in the chosen discipline, but remember – all the training in the world will not improve someone who just doesn't have any further potential.

Extensive control and options
Excellent game animation
Long-term enjoyment with International aspect

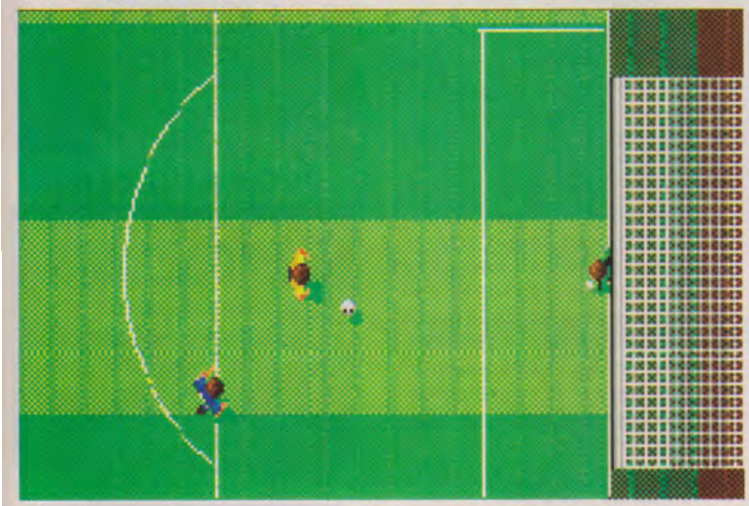
PROS AND CONS

Game builds up very slowly
Pen and paper needed for serious use
Inadequate manual

CHALLENGE



There are times when you'll be glad for the individual training you spent on your goalkeeper...



Depending on how aggressive the team, or the level of players' fines that you set for yellow and red cards, penalties will take place with varying regularity...

Of course, it doesn't matter what you do unless your team's going to win matches and no matter what wheeling and dealing you do off the pitch, it's really about how your team perform.

This depends ultimately upon several factors – among these are the formations that you choose in matches, how players are disciplined and most importantly, how they are trained.

You can train your team in several different ways, choosing two methods for each session from a list comprising Indoor Game, Circuit Training, Outdoor Game, Skills or Set Pieces, using each method to strengthen various sides of the squad's current performance.

Individual squad members can be singled out for more particular training in the hope that they may increase their prowess in various skills, including Short or Long Runs, Passing, Tackling, Shooting and Skills.

In addition, if you select a goalkeeper for individual training, there are some different skills which include High and Low Crosses, Handling, Saves and Kicks.

ON THE FIELD

Once you've trained the team it's time to put the theory into practice. Before the first game of a new season, the manager must decide on a formation – in later games choosing one after having had a report on your opponents' play from a scout will normally help. If you change formation for any game, you will have to place each player individually. This is where a pen and paper need to be used so that you have all the information to hand when using different formations and players. It's a failing of the game that this function can't be done by the software – you seem to spend a lot of time updating player information as you can't escape from the team picking menu to look at characteristics.

Player reports, whether on your own squad or supplied by one of your scouts on other teams' players, give a comprehensive file on any player's ability. John Barnes is looking pretty good...

You can resign from a club after a minimum period and put yourself on the job market. Try to accept offers from clubs that have a bigger ground and therefore, a better chance of moving up divisions.

POTENTIAL WINNERS

The real key to success with ***Graham Taylor***, however, lies in moving to clubs that have the potential to climb up the leagues and make it to the premiere division. This is where the game really scores and it triumphs as a management sim. The excellent graphics and logical approach to control, however, is somewhat lost – degraded by a woefully inadeqaute manual, and as a result the game appears far more superficial than it actually is.

This is, however, an intriguing game with real long-term playability – and it could have been even better with just a little more thought.

INSIDE INFO

All of the teams used in *Graham Taylor's Soccer Challenge* are currently playing in the English league, and such is the detail of the game that not only are the actual names of over 1,000 professional players' used but also, when the game begins, each and every side has that team's squad (accurate as of last season), and even their personal details are correct, giving you their height, age and dates of birth. A testament to the accuracy and detail in the game and extremely handy if you want to send your favourite footballer a birthday card...

"A premier game with real long-term appeal for management fans"

NAME: GRAHAM TAYLOR'S SOCCER CHALLENGE
COMPANY: DOMARK
CONTACT: 081 780 2222

PRICE: £25.99
RELEASE DATE: OUT NOW
MIN MEMORY : 1 MB

EASE OF USE	★★★★★
DOCUMENTATION	★★★★★
EFFECTIVENESS	★★★★★
VALUE FOR MONEY	★★★★★

OVERALL 84%

MEGASPORTS

Armchair athletes the world over can now add a little variety to their lives. Alan "the armchair" Dykes breaks into a mild sweat...

Deep in the mists of home computer time some quixotic figure decided that it would be rather jolly to produce computer simulations of some of the more off-beat sports in which the human race takes part. Sure, there have been countless football sims but what about figure skating, archery and skeet shooting, not to mention BMX stunts, tobogganing and kayaking? Something had to be done about it and a company named EPYX took it upon themselves to do it.

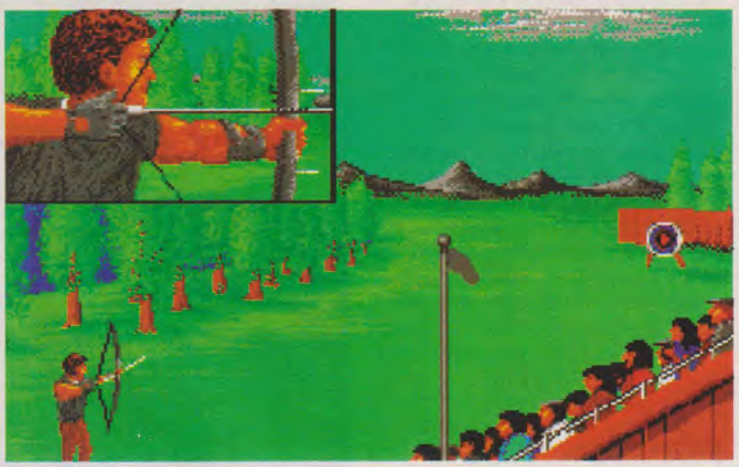
It all started back in 1984 with an eight-game package called ***Summer Games*** which included various athletic simulations along with swimming, skeet shooting and gymnastics. This was followed up in the late 1980s by four similar packs, including a second ***Summer Games***, a ***Winter Games*** and, most intriguingly of all, a ***California Games*** collection.

Now they're all back in force. All 37 simulations are available in their original form on ***Mega Sports*** and they're still great fun to play.

None of these simulations would ever stand up to scrutiny as a single release but as a collection they manage to provide hours of frivolous fun, especially in multi-player mode where you can compete against friends in much the same manner as the real thing.

Bobsleigh – a view of the track and the course, but watch your speed.

Control is very simple. Moving the joystick allows your character to make certain moves. These can be as basic as just wiggling it as fast as possible in the 100m dash or using a more sophisticated series of moves to get your contestant to do all manner of strange manouvres in, for instance, gymnastics, figure skating or diving. That said though, control does seem to be a bit heavy or muddled on some of the sims and needs getting used to.



Going for gold. A keen eye is needed for Archery.

Slalom skiing – try and keep upright.

CHANGE OF SCENE

Overall the standard of graphics is good, and you won't get bored with the wide variety of scenarios available. There are nice touches too, like the rabbit which wanders past the target on the archery range and the sharks and dolphins which regrettably get in your way while surfing. Sound is also moderately good considering that, sport is never an easy subject to provide sound for.

Mega Sports is an enjoyable collection – in fact it's moderately addictive. The competition aspect of always wanting to do better, no matter how infuriating individual games become, is likely to keep coming back for more. If you're really after something other than the normal run-of-the-mill footie and racing sims then this collection of little sporting snippets should be right up your street.

Plenty of games
Reasonably good graphics
Simple but involving gameplay

PROS AND CONS

You may have seen most of them before
None of the games have any real depth
They may be too simple to last very long

"Plenty of fun and games but not much real depth"

NAME: MEGASPORTS
COMPANY: US GOLD
CONTACT: 021 625 3366

PRICE: £25.99
RELEASE DATE: NOW
MIN MEMORY : 0.5 MB

GRAPHICS	★★★☆☆
SOUND	★★☆☆☆
VALUE FOR MONEY	★★★☆☆
PLAYABILITY	★★★☆☆

OVERALL **78%**

Tonight you could become a Railroad Tycoon, shape a Civilization or indulge in a little Piracy in the Caribbean

Alternatively, you could grab an early night

With such voyages of fantasy at your fingertips, there's no reason to have a 'quiet night in' ever again. Devised by the guru of games design, Sid Meier, each adventure involves strategic role playing to stretch your imagination and sharpen your wits.

So you could be playing with the train set you always wanted, surviving and thriving in the company of Genghis Khan or navigating a galleon around the Spanish main.

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If hunting down mutations is your thing, then this could be the game for you. Tony Dillon tries his hand at despatch riding. . .

D/GENERAT

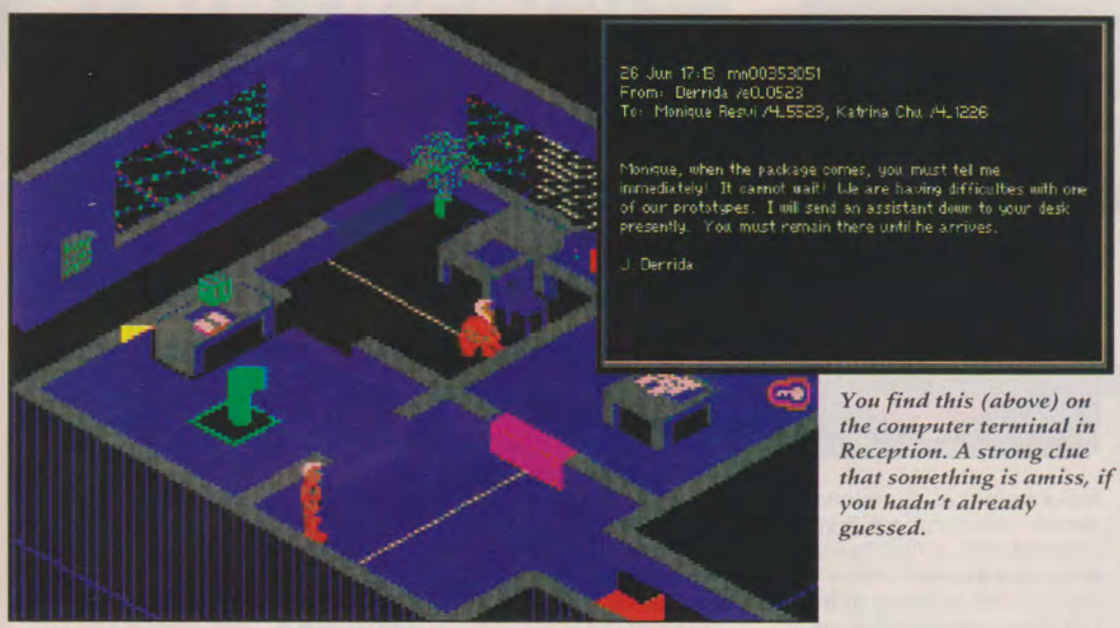
This (above) is the Genoq building, standing tall in the centre of a sprawling metropolis. You land on the 80th floor and have to make your way through the building to the 90th.

Left: the Reception, where you are about to rescue the receptionist in a daring way. Not without asking a lot of questions first, though, by selecting responses from the menus presented.

There was a point, a few years back, when isometric adventures were all the rage. Anyone with their roots set in the land of the ZX Spectrum will remember with a sigh the excellent titles released by Ultimate. Since then, there have been surprisingly few clones in the 16-bit market, especially when you think how well they could come across. ***D/Generation*** is one example of what could have been achieved over and over again.

The setting is a huge scientific laboratory, set at the top of a skyscraper at some point in the indeterminate future. The company is Genoq, a leading name in genetic manipulation. Deep within this high security building, scientists have been working on new forms of life, their aim being to replace standard security guards. After years of development, they have created four forms of life, the A/, B/, C/ and D/Generations, each slightly more advanced and deadlier than the other.

The only trouble is that something seems to have gone horribly wrong. The D/Generation has gone berserk, letting everything loose and upsetting the security system. The armed laser cannons that line the building were put there to keep the artificial life forms in check.



You find this (above) on the computer terminal in Reception. A strong clue that something is amiss, if you hadn't already guessed.

A good example of a typical room. Here we have a laser turret, a hostage, a key begging to be picked up, along with an assortment of doors and switches.

> ***"Excellent mix of blasting and strategy"***

NAME: D/GENERATION
COMPANY: MINDSCAPE
CONTACT: 0444 482 545

PRICE: £25.99
RELEASE DATE: NOW
MIN MEMORY : 1 MB

GRAPHICS	✪✪✪✪✪
SOUND	✪✪✪✪✪
VALUE FOR MONEY	✪✪✪✪✪
PLAYABILITY	✪✪✪✪✪

OVERALL 81%

ION

Now they are being used to track down human meat...

DELIVERY

You are an unsuspecting courier, with a very important package for Jean Paul Derrida, boss of the D/Generation project. Landing on a hoverpad high up on the building, you immediately notice that something is wrong – probably because the first time you walk through the door into reception you get blown away by a laser cannon. Most men would give up at this point, but not you. You bounce back, determined to deliver the package as arranged, and probably rescue a few people on the way.

As in the good old days, the game is viewed in a forced perspective over 120 screens each with its own set of puzzles. The aim of each level is to secure the room by getting rid of all the rampaging mutations, at the same time rescuing any survivors you find cowering under desks and the like, and then getting to the exit to the next room.

This, of course, is never as easy as it sounds. Each room is broken up into enclosed areas, connected by electronic doors. The switches to open the doors are set into the walls, but there is no logical connection between the positioning of a switch and the positioning of the door. The switch on your right might open the door on your left, but then again it might open the door on the far side of the room. Similarly, you have no guarantee that one switch will open one door, or even do anything at all. Even just finding your way through a room takes a little planning.

LOGICAL ORDER

The rooms, although laid out as an office plan, are played sequentially. There is only one way through the building, and you can't move onto the next room until you have finished the first. A door is placed at the exit of the room to stop you leaving prematurely, and this door opens when the room is "safe" – when all mutants have been destroyed and there is no danger of any more appearing. To do this, you have to destroy all the bouncing mutations and close all the vents set into the floor by walking over them. The problem is, the mutants seem to know that you are coming and leap out of the air vents just before you get to them. Once all vents have been closed, a red light turns green and the far door opens.

In the first room – the reception – you come across two of the game's major features, people and computers. The people are employees of the company who are too scared to move, so you find them cowering behind desks and filing cabinets. Once you approach them, they will do one of two things. They will either leap up, shake your hand and say "Let's get out of here", from which point they will stick to you like glue until you lead them to the entrance of the current room, freeing them and earning yourself an extra life into the bargain. Or they will leap up, shake your hand and say "Hi". This signals that they are willing to hold a conversation, and your part in this involves selecting one of the three verbal options displayed at the bottom of the screen. After a little question and answer session, they will respond with "Let's get out of here" and wait to be led to freedom. For the most part, they won't

INSIDE INFO

Robert Cook isn't a particularly famous programmer, although one of his biggest games to date is one of the biggest ever released on the Commodore 64 and Atari 400/800. Anyone remember Karateka? *D/Generation* is a complete change for Robert, as not only does it not have any karate in it, he also worked as part of a team of seven rather than alone, although he does claim all design credit. He is currently studying Computer Science at Yale University in Connecticut, and apparently wants to be a genetic engineer when he grows up. Maybe *D/Generation* contains a grain of truth...?

WEAPONS

To begin with, all you have in your possession is the parcel itself, not much use for opening doors or as a weapon

Scattered about the game are all the items you could possibly want, from an incredibly useful laser gun, through grenades, shields, a clock that slows down time to numbered security keys, needed to get through numbered security doors, of which there are loads. Most of the time these are logically placed. If you come across a security door for which you don't have the key, chances are there's going to be one in a nearby room.

Out of everything, the laser cannon is the most important object to collect. Not only does it provide a very handy line-of-sight weapon, but you can also bounce shots of walls, to knock out things around corners, as well as use it to activate door switches from a distance.

have anything of vital importance to tell you, but sometimes you can come across a real gem, such as a passcode for a door or news of a secret exit.

The computers provide the other source of information. Walking up to one activates it, and the main display is replaced with whatever is on the computer screen. This can be anything from a memo sent from one department to another, to an alarm system asking for security clearance before letting you go on. Again, most of the time they won't have anything useful to tell you, but it is still worth checking them, just in case.

There are only four types of mutant for you to go against, but these are more than adequate adversaries. What they lose in variety they more than make up for in numbers, and even at the lowest level of the genetic ladder, three of these in an enclosed space is hard to deal with.

Frantic stabbing on the fire button is necessary, sending shots bouncing and careering off walls in all directions. It's just as well that the bullets can't harm you!

At first glance, ***D/Generation*** looks primitive. Simplistic, almost monochrome graphics coupled with a flip screen playing area don't make for a particularly enticing game;. but after a couple of goes, you realise just how addictive it is. There's a lot of gameplay in there, and some of the screens pose more of a puzzle than ***Tetris***.

It might not be the most original game this side of ***Breakout***, but it certainly is fun. There's enough blasting to keep even the most trigger-happy happy, and more than enough strategy involved to keep thinkers thinking.

A very big game
Responsive controls
Well thought-out puzzles

PROS AND CONS

Looks basic
Can be tedious playing through the same rooms
Some objects are difficult to see

MULTI-GENERATIONS

Four types of bad guy might not seem like much, but this family have more than enough tricks to keep you on your toes

A The A/Generation has the appearance of a red rubber ball, and simply bounces around the room aimlessly, making a bee line for you as soon as it has a good line-of-sight.

B The B/Generation kills its victims by smothering them.It is an intelligent cylinder that can hide underneath the floor. Once one has spotted you, a single leap is all that is needed to crush you.

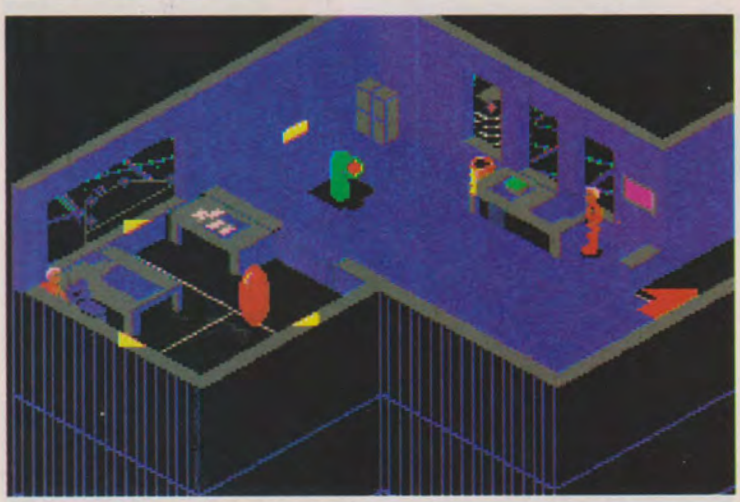
C The C/Generation is a humanoid which possesses chameleon capabilities. It can disguise itself as anything before it suddenly leaps forward and decapitates someone.

D Little is known about the D/Generation. Only one exists.

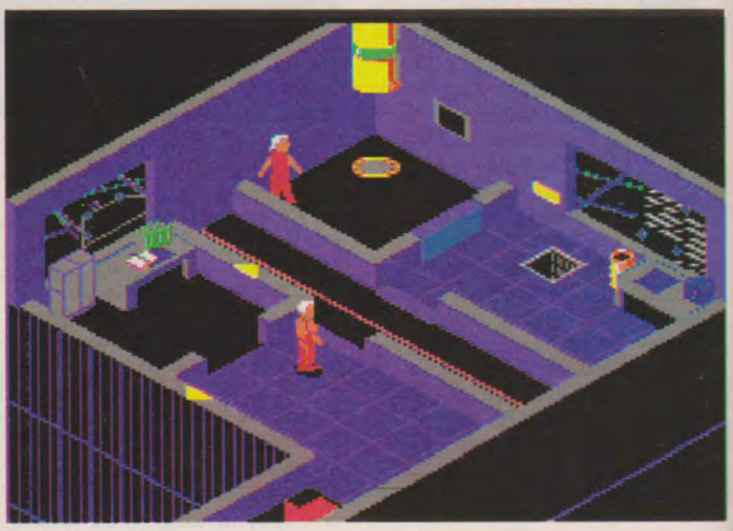
An A/Generation mutant – ever been attacked by a walking red nose!

One of the game's trickier moments, these narrow corridors take a strong sense of timing to get through. The plasma beams bounce off the walls at a high speed, and one touch means instant death.

The circle at the top of the screen (below) is the teleport to the next floor. Before you can use it you've got to try and clear the room...



You can't help but feel sorry for the poor guy in the far left corner, cowering behind a desk while an A/Gen bounces around in front of him.



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PUSHOVER

Is there still a place in the market for puzzle games? Ocean certainly seems to think so if their latest domino-toppling extravaganza is anything to go by. Garth Sumpter sets them all toppling...

There is a part of human nature that is fascinated by destruction. Even babies have a nasty habit of pushing over their building blocks just at the point when you've built a perfectly scaled model of the Eiffel Tower.

Ocean has not had too much success to build on with original pure puzzle games either. ***Puzznic*** was a good attempt, but whilst it had depth and a whole host of levels, it was really just another puzzle game that failed to generate the excitement of ***Tetris***, ***Pipemania***, Ocean's own ***Plotting*** or even Psygnosis' recent monster hit, ***Lemmings***.

Pushover is a curious blend of puzzle and strategy. Each unique level has a series of platforms upon which are liberally scattered various numbers of dominoes, which you must arrange, using your ant character to move them around where needed, so that once you push over one domino, it sets off a chain of events resulting in toppling all the dominoes and finally knocking over the single, triple-striped trigger tile.

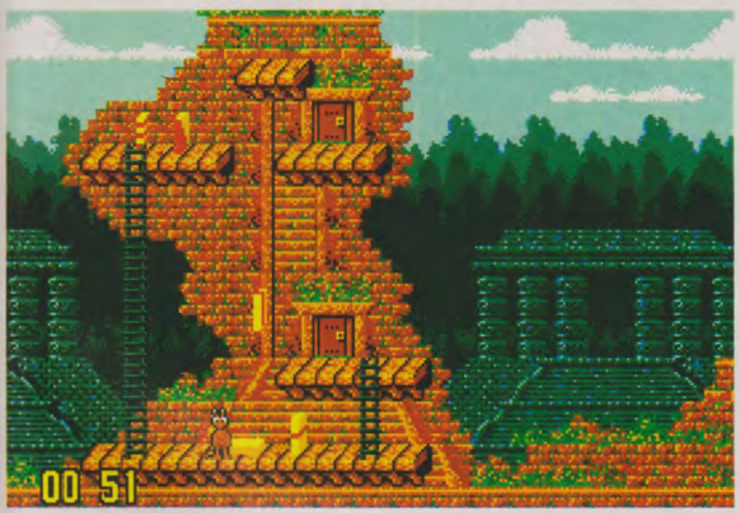
Sounds easy? It is on earlier levels, but the real crux of ***Pushover*** is in having to work not only with various platform levels, but also with eight other dominoes which don't behave as you would expect of this genre. Each of these patterned dominoes react in different ways and as you progress, things get frustratingly difficult.

PLANNING AHEAD

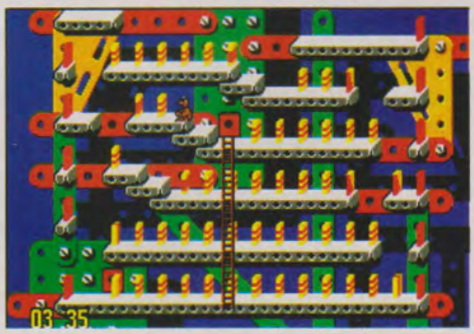
On each screen, you need to work out a strategy – best done by working backwards from the end game domino after having given them an exploratory push to see what will happen with the current setup. Now's the time to move pieces (if needed) in order to obtain the desired end effect, toppling the trigger tile last and thus opening the door to the next level.

Later levels get really complicated: you have to move tiles around the screen making use of each of their characteristics. On later levels you must develop a strategy for getting your ant to the next level portal too.

Pushover is an original puzzle game that requires progressively deeper thought as you make your way through the wealth of levels and deserves some comparison with the better known puzzlers like ***Pipemania***, and even ***Lemmings***, but where ***Pushover*** fails in a direct comparison with these games is in the immediacy. Although it has a countdown timer to show you how much time you have left to exit the level, it doesn't have the same feeling of drama as the others. But ***Pushover*** remains a competent puzzle game that should appeal to puzzle fans that are looking for something just that little bit different.



Here's an ascender floating towards the top of the screen. The bottom of the platform should send it toppling towards the final few dominoes.



In space, no-one can hear your scream...

"Easy at first but increasingly difficult later"

NAME: PUSHOVER
COMPANY: OCEAN
CONTACT: 061 832 6633

PRICE: £25.99
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5 MB

GRAPHICS	●●●○○
SOUND	●●●○○
VALUE FOR MONEY	●●●○○
PLAYABILITY	●●●○○

OVERALL **75%**

DOMINOES, ONE, TWO, THREE...

STANDARD
A plain yellow domino, this reacts the way you'd expect it to. Hit it with another domino and it falls over.

STOPPER
Appropriately named, this tile works like a brick wall – reversing a Tumbler and stopping all other tiles in their tracks.

ASCENDER
When it's hit, this domino rises directly up until it hits the bottom of a platform and then falls over and sticks to the platform's underside.

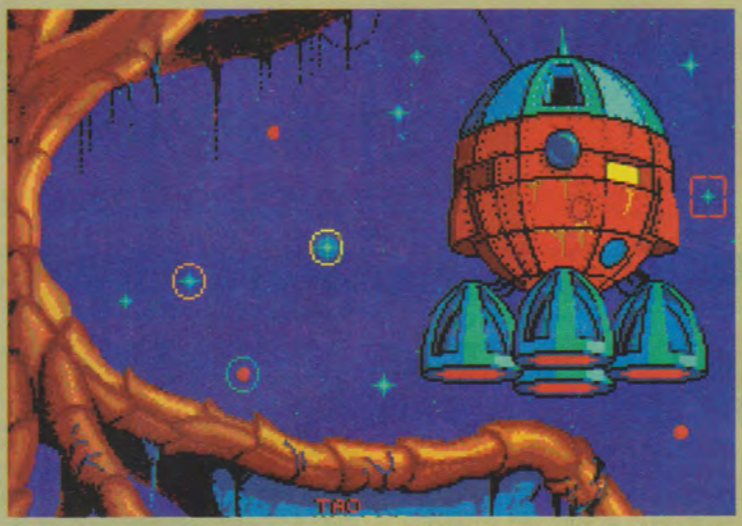
DELAY
This tile just has a several second delay which is useful in later levels to move your ant or other tiles, to new positions on the platform - especially useful when you consider the next domino...

EXPLODER
Topple onto this tile in any direction and it will immediately explode – and normally leaves a large, impassible hole in a platform.

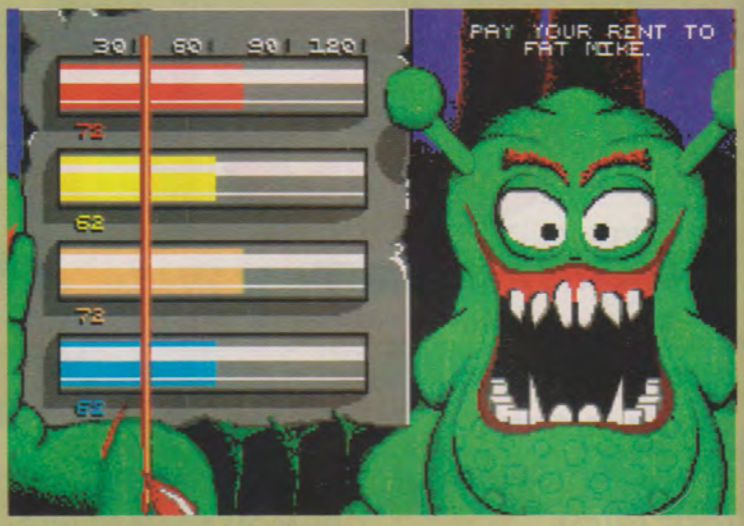
BRIDGER
True to its name, these tiles fall to become a bridge between platforms.

TUMBLER
This tile will continue to topple along platforms on its own indefinitely.

SPLITTER
Once hit, this splits into two halves, one red and one yellow, which tumble off in the two opposite directions



Setting the destinations for the rockets. The 'P's indicate the locations of pirates.



Paying your rent to Fat Mike. If you don't have enough to pay, or don't want to, then he won't let you rent another field.

TRADERS

If buying, selling and eating snails is your thing, then D.I.'s Traders could be right up your street, as Tony Dillon discovers. . .

Traders is not a serious strategy game. Set 2,000 years into the future, the only surviving creatures are the plubbers, descendants of the primitive snail. As a plubber, your life is fairly simple. Rent land from Fat Mike, cultivate it, create enough stock to generate the cash necessary to send rockets to faraway planets with the aim of finding true snails – they form a currency equivalent to gold bars and you use them to pay your rent, which in turn earns you more land. Your aim is to make a preset amount of money before anyone else, at which point you can emigrate to Australia and live out the rest of your days watching archive footage of ***Home And Away***.

The game is broken up into four main segments, and each helps you on the way to a prosperous and relaxing future. Firstly, you have to cultivate your land. Next you must set up all your defences and attack other players. Then your rockets have to be sent out for snails, and finally you get to trade with the other players to keep both your stores and profits stocked up to the required levels.

SQUARING UP

Naturally, that's a very simple description. The game itself is far more complicated than that – overcomplicated in fact. The farming element of the game demonstrates this. You begin with two squares of land. On one you have to build a house, and on the other you have to build one of four things, either a rabbit hutch, a water hole, a flower bed or a rocket pad. That's the easy part. Everything other than the rockets directly changes the supplies of everything else, and everything has a purpose. The rabbits are trained to search for water, but before they will do anything, you need to catch the perfume from the flowers grown in the flowerbeds. To grow flowers in the flowerbeds you need to plant them in a water hole first. But you can't have a fully working water hole until the rabbits have done their jobs. It's a Catch 22 situation, and that is where the trading aspect comes in.

Four players play at once, and all can be either human or computer controlled. At the end of the turn, you can buy or sell anything you cultivate such as flowers, water or perfume, to help your farm succeed. Of course, everyone is trying to do the same thing, and if you don't have a definite strategy from the start, it can sometimes be very easy to get lost and sell the things you actually need most, while at the same time buying what you already have an abundance of.

The main problem with the trading section of the game is that it is on a timer. For each element there are two screens. On the first, you decide whether you are going to buy or sell the currently displayed product. If everyone is buying or everyone is selling, obviously there is no market so you move onto the next element.

If there is a split decision, then comes the bartering section. People selling start at the top of the screen, and

Four people can play at once

User-definable levels let you skip the bits you don't want to play

PROS AND CONS

Strategy element is confusing

Timer restricts thinking

BUYERS GUIDE

Don't just take our word for it! Why not compare Traders with other recent strategy titles?

	Gra	Dep	Dif	Com	Overall
Traders	9	7	8	5	90%
Powermonger	7	6	8	5	85%
Sim City	8	8	7	8	83%
Steel Empire	8	6	6	7	82%

Key: Gra = Graphics, Dep = Depth, Dif = Difficulty, Com = Complexity

people buying start at the bottom. Moving up and down on little lifts, you set the price you want to buy or sell at and wait to see what happens. The problem with these screens being on a fast timer is that you rarely have enough time to decide how much you want to buy or sell, if at all. When playing, it's a good idea to keep some paper at hand, so you can make notes of what you need.

EVERYTHING IN THE GARDEN...

The crop is also seriously affected by weather. Before you receive the fruits of your labour, you are given a weather report along with the effect it has had on crops. Rain is good for rabbits but bad for the water basins. Conversely, the sun is bad for the rabbits as it makes them tired, but is extremely good for the flower beds. It's extremely frustrating to have set up a really good spread of flower beds only to discover that there has been a hurricane and all the perfume from the flowers has blown away.

Then come the snails. The only way to get these is to send rockets to other planets. The more rockets you have, the more snails you come back with.

However, there are pirates in space, some of whom are only too happy to take pot shots at passing rockets. Send your rockets to a planet with pirates on it and you'll not see them again.

After a few turns, when all of the planets have been visited, a number between one and three will appear next to their name – this indicates how rich in snails the planet is. The higher the number, the more profitable the cost. If that planet has pirates from your own breed (in your colour) then your rocket is welcomed there, and things will really swing your way.

If all that isn't enough, there's a wargame to play too, although this can be switched off, thus making the game run much faster. With your money, you can buy defences and robots to guard your stores.

The more money you have, the more effective the weaponry you can buy. Get your robot to another base and if it is clever enough it will break in and steal your opponent's booty.

Playing ***Traders***, you get the impression that there is a huge chunk of logic missing somewhere. The main currency is snails, and it seems that the only way to win is to get lots and lots of snails, yet the whole trading aspect of the game has nothing to do with snails, neither does the farming side. It's very difficult to understand, the design seems random and sprawling and the presentation is generally messy. ***Traders*** definitely isn't the game it could have been.

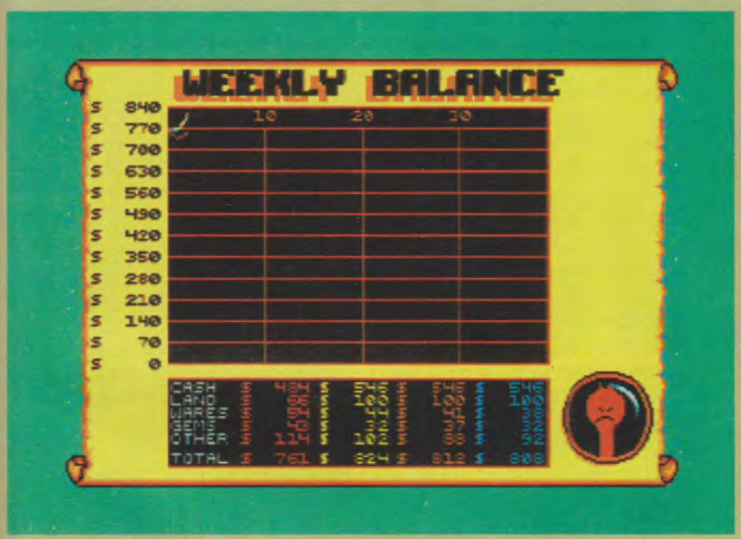
"Confusing and lacking in a clear plot"

NAME: TRADERS COMPANY
COMPANY: DIGITAL INTEGRATION
CONTACT: 0276 684959

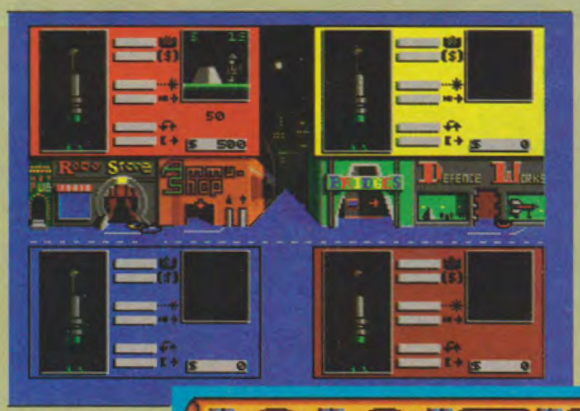
PRICE: £25.99
RELEASE DATE: OUT NOW
MIN MEMORY : 0.5 MB

GRAPHICS	✪✪✪✪✪
SOUND	✪✪✪✪✪
VALUE FOR MONEY	✪✪✪✪✪
PLAYABILITY	✪✪✪✪✪

OVERALL **61%**

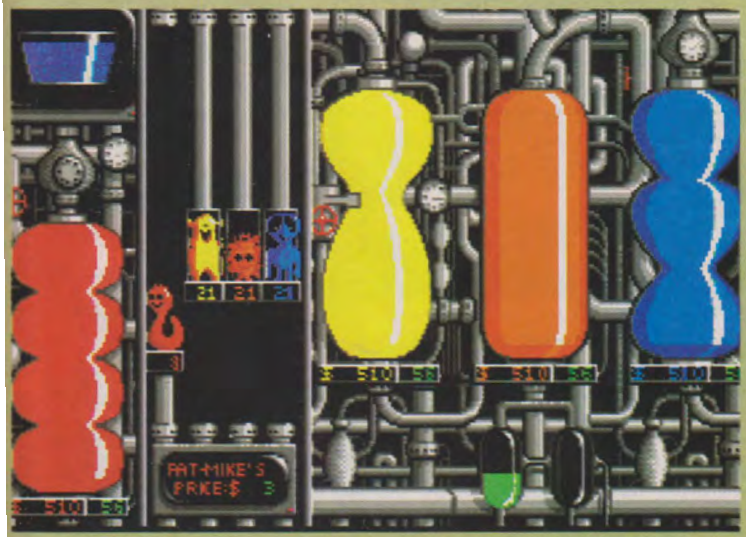


Each week you are given a bank statement. Your expression says more than the figures at the bottom!



Building a robot is easy. Just walk into the shops and pick up the parts you need.

The fields laid out before you. The areas enclosed in dotted lines are the ones currently rented.



The heart of the game – the trading itself. The guys at the bottom are buying, but will they match the price of the guy at the top?

MAKING MONEY

Money is the name of the game, but what's the easiest way of getting it?

There are many different ways to generate your cash, the most obvious of which is to sell items to other players. On top of that, you can sell back any land you don't want. Furthermore, you can decide to deal in gems, provided your rockets find any while they are looking for snails – and if that isn't enough, why don't you try your hand in a lotto? With 200 dollars to be won, all you have to do is guess the colours of the four lights in the right order.

HOOK

Tony Dillon, the little boy who never grew up, meets up with the fairies at the bottom of Ocean's garden. . .

Picking up some anchor rope on the pier. It will be used later on for swinging across the square.

The opening screen, complete with a greeting from Tinkerbell.

As the pointer moves over exits, a caption appears telling you where they lead to.

Hollywood took a serious risk when it released ***Hook*** to an excited audience this year. Not so much a reworking of the original, this was more a completely new sequel to the JM Barrie classic.

The little boy who would never grow up, did. Peter Banning was once Peter Pan himself, before exchanging his green tights and interesting selection in tunics for something a little more businesslike and mundane.

He has long forgotten the days when he and Wendy would fly around the room and do all other kinds of magical things with a fairy. Now he is respectable and middle class. Only the unthinkable has happened, which is just as well really otherwise there wouldn't be much of a plot. Captain Hook has returned and kidnapped his two children. Peter has to return to Neverland and rescue his children, but not before rediscovering his forgotten past.

A radical change in storyline leads to a radical change in style for Ocean. They've had a huge run of big film licences in the last couple of years (***Batman***, ***Robocop 1***, ***2*** and ***3***, ***Total Recall*** and ***The Addams Family***, to name but a few) and every one has been an arcade game.

You would think that ***Hook***, with its swashbuckling action, would be ripe for yet another slap-a-compendium-of-game-styles-together Ocean bundle, but Ocean obviously doesn't agree.

ICONS

This time they've shied away from the predictable and come up with an icon-driven graphic adventure, in the mould monopolised by Sierra and Lucasfilm. With titles such as ***Lure Of The Temptress*** and ***Le Chuck's Revenge*** currently on the market, ***Hook*** has some pretty stiff competition to live up to. Sadly, in comparison to these titles, it pales miserably.

You begin the game as Peter Banning, standing in the middle of the Pirate Town Square, near the docks where Hook's ship is moored. You look decidedly out of place in your modern clothes, and no self-respecting pirate is going to let you near their ship in a pair of slacks. Armed only with a cheque book, your quest begins.

The game is played, as always, with the mouse. The top two thirds of the screen are taken up with the main play area, which is displayed as a side-on view of the action, so that Peter can interact with every character on screen and hardly any of the backdrop.

At the bottom of the screen are the five game options, pictures of yourself and Hook, and your inventory. The controls should be familiar enough by now. To move around the game world, simply click the pointer where you want to move to. To perform any actions, click on the appropriate icon, and then click on either the item or person you wish to perform the action on. Easy.

TOO SIMPLE

And that is where the problem begins. It doesn't matter how cleverly an adventure is arranged, five commands just aren't enough to make for interesting puzzles. The first, Look, gives you a short text description of whatever you click on – though never enough to make it worthwhile using.

Varied locations and characters
Based on a strong storyline

PROS AND CONS

Illogical puzzles
Controls don't always respond

A WARNING!

Owners of 520 ST/STEs who are considering getting hold of Hook, forget it. Although the label on the cover of the box proudly proclaims "1 Meg recommended", which suggests that the game is enhanced with a megabyte of memory, I was greeted with the message "THIS GAME REQUIRES ONE MEGABYTE TO RUN". So Ocean, shouldn't the label read "1 Meg Required"?

Peter can move in and out of the screen, as well as side to side. Here he is approaching an old drunk from the market square.

Most people in the game will have some strange things to say, like this guy who won't let you buy him a drink until you promise not to take his clothes off.

In true Treasure Island style, the X in the sand marks the position of buried treasure. Or does it?

The second - Talk To - is far more useful. Clicking on this, and then upon any character on screen brings up a message. This is your opening line, and you can change it by way of the right mouse button. At any time in the conversation you have a selection of half a dozen things to say, usually questions concerning the location of your kids, Hook himself and the various parts of the pirate uniform that you will need to get hold of in order to gain access to the ship.

While most of the people you meet will be drunk, and therefore not have a lot to say for themselves, occasionally you will come across a gem or two, like the mad doctor who reveals the location of his hidden alarm clock, something that Hook despises.

Then there are the three object manipulation icons - pick up, use and drop/give to. The pick up and drop work well enough, but the program isn't "intelligent" enough to allow full use of the objects you pick up. Each object in the game seems to have a specific use, and the game won't allow any other. For example, early on in the game you can collect a clothes pole. In the same location, there are three items of clothing on the washing line, but you can only use the pole on one. Not only will the program not let you collect the other clothes, it won't even respond when you click on them.

GUESSWORK

You can probably already guess that most of the time, using objects is a matter of trial and error. Sometimes, even that isn't enough. In another incident, you collect a rope with no indication whatsoever of where to use it. After a while of going everywhere I could, clicking like crazy and finally giving in and asking somebody, I found out that the rope was used to swing across the square to get to a new location. This is something that might seem logical to Peter Pan, but it doesn't exactly make for fun adventuring.

Visually, ***Hook*** is quite strong. Whilst it lacks the finesse of ***Lure Of The Temptress***, the backdrops are individual enough to become recognisable. For some strange reason, most of the characters in the game are inanimate, making it look unconvincing, not a good thing for an adventure game. Why a few frames of animation couldn't have been added is anybody's guess.

In the wake of the classics that it follows, ***Hook*** comes across as nothing more than a poor imitation. There is little logic to the problems, and the feel of the game is of one that has been simplified to the point of being unenjoyable.

A few better thought out puzzles would have improved the game no end, but as it stands it's not worth the time or the money.

"Under-developed idea. Could have been a hit"

NAME: HOOK
COMPANY: OCEAN
CONTACT: 061 832 6633

PRICE: £25.99
RELEASE DATE: NOW
MIN MEMORY : 1 MB

GRAPHICS	○○○○○
SOUND	○○○○○
VALUE FOR MONEY	○○○○○
PLAYABILITY	○○○○○

OVERALL 61%

BUYERS GUIDE

If the review doesn't help you, here's one of our handy little charts to help you get the picture of how Hook compares with the best of the rest.

	Gra	Sou	Dif	Puz	Overall
1 Hook	5	4	6	2	61%
2 Le Chuck	8	8	7	8	89%
3 Loom	7	6	8	9	86%
5 Lure Of The Temptress	9	6	8	9	83%

Key: Gra=Graphics, Sou=Sound, Dif=Difficulty, Puz=Quality Of Puzzles

VFM

There's a strong sporting theme running through our budget pages this month, so if you're looking for some cut-price action, look no further. . .

TEAM SUZUKI

GBH ● £7.99 ● 0742 753423

IN BRIEF: So you've sat glued in front of the television screen, watching the motorcycle racing and listening to the dulcet tones of Murray Walker, and wished you could be there yourself, powering around the circuit on the back of a 500cc powerhouse. GBH gives you the opportunity to do just that in ***Team Suzuki***, a racing simulation which first made an appearance on the full-price Gremlin label last year. Produced in association with Suzuki themselves, ***Team Suzuki*** is a polygon-based, 3D extravaganza which has the player charging around 16 tracks with the aim of becoming the best rider in the world. Not the simplest task ever, but at least there are three different levels of competition – 125, 250 and 500cc bikes, the latter obviously offering the greatest challenge. Before any racing can be done however, the player must qualify to gain a position on the starting grid; the faster the qualifying time, the better the position. After that, it's a straight thrash against the other competitors, each of you vying for that elusive first place. Either a single race or an entire season can be chosen, with the points for each race in the full season being added together to determine your place in the championship table.

Two-wheeled racing par excellence, Team Suzuki is a winner for GBH.

ST REVIEW COMMENT: "***Team Suzuki*** is a demanding game with a wealth of options and enough of a challenge to push the most skilful player. Graphically excellent, with a fast frame update, you will find yourself battling with this one for a long time."

★★★★

NIGHTBREED

HIT SQUAD ● £7.99 ● 061 832 6633

IN BRIEF: When Ocean picked up the rights to create a game based on Clive Barker's movie ***Nightbreed***, they had high hopes. The plot sounded like perfect game material – youngster tries to commit suicide after being accused of mass-murder, escapes from a high security mental institution and finds himself in a world of monsters, before turning into one of them himself. Of course, the film bombed and Ocean was left with a license that didn't promise much. That didn't stop them coming up with a great arcade adventure and putting it out on their Hit Squad budget label, though. The object of the game is to save the Nightbreed from destruction by the Sons Of The Free, as well as finding your girlfriend who has been kidnapped by The Mask, actual perpetrator of the murders which you have been accused of committing. The game takes place both above ground, in the Necropolis graveyard, and down in Midian, home of the Breed. Both members of the Nightbreed and The Sons Of The Free are out in force and, while the Breed are to be avoided, killing the Sons can result in weapons and other items that will prove helpful.

ST REVIEW COMMENT: "Don't be put off ***Nightbreed*** just because you wasted good money seeing the film, as this is much more enjoyable. Lots of weird and wonderful monsters, plenty to do, see and beat up and, above all, a high degree of playability are the key elements of ***Nightbreed***. Well worth the money."

★★★★

Monstrous movie mayhem in Nightbreed, a license which is better than the film for a change.

INTERNATIONAL 3D TENNIS

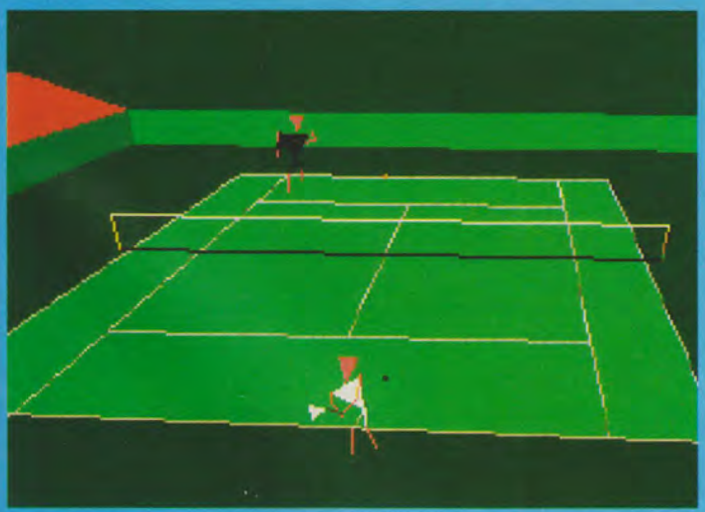
GBH ● £7.99 ● 0742 753423

ATARI ST REVIEW BUDGET BUY

IN BRIEF: Get ready to serve and volley with the best of them in ***International 3D Tennis***, a simulation of the popular sport which brings the nation to a standstill for two weeks in the summer. Created by Sensible Software, the programming team responsible for a number of hit titles, including ***Wizball*** and ***Sensible Soccer***, ***International 3D Tennis*** is a one or two-player game that allows the player or players to travel round the world to compete in various tournaments and earn a hefty pile of cash in the process. As the title suggests, the action is viewed in second-person perspective 3D, with the characters portrayed in filled-in wire frame graphics. A number of camera angles can be accessed, showing the game from all over the court. A total of 72 tournaments can be played, either on their own or as part of an entire tennis season. While playing at the lower levels, the computer will show the optimum time to hit the ball by causing your player to flash. On the higher difficulty settings, by moving the joystick to certain positions, spin can be added to the ball in the hope of wrong-footing the opponent and winning that point.

ST REVIEW COMMENT: "At first, the relatively slow pace of ***International 3D Tennis*** may put some people off, but after a while you get used to it and become engrossed in the action. The season option adds longevity to the product, and two-player mode is great fun. Game, set and match to ***International 3D Tennis***!"

★★★★★



International 3D Tennis – more enjoyable than seeing McEnroe lose his rag. Again.

EMLYN HUGHES' INTERNATIONAL SOCCER

TOUCHDOWN ● £9.99 ● 0268 541126

IN BRIEF: Soccer comes to the Atari ST once again, this time in the form of ***Emlyn Hughes' International Soccer***, a football sim endorsed by the ex-Liverpool and ***A Question Of Sport*** star himself. First released by Audiogenic, Entertainment International has snapped it up and released the game on its new Touchdown label. After wading through the scores of different options allowing the player to pick his team and select players, it's out onto the pitch for one or two-player action. Take on the computer or a friend, or play a two-player game against the ST itself! The names of all the players can be edited and even their skills can be changed to create teams close to their real-life counterparts. Play friendly matches, or enter one of three competitions – a league in which all eight international teams play each other for points, a Cup competition played on a knockout basis, or a season which incorporates both the league and Cup. Your players can perform a number of moves, including throw-ins, chips and lobs and even diving headers in their search for the elusive goal that will lead to victory.

ST REVIEW COMMENT: "***Emlyn Hughes' International Soccer*** is an enjoyable kickabout, especially in one of the two-player modes. The ability to change the characteristics of each character is a worthwhile addition, and once the controls are learned, it is possible to play some stunning, free-flowing passes and shots on goal. Although not in the same league as ***Kick Off 2***, this is nonetheless a solid title that won't be left wanting in the last 10 minutes of extra time."

★★★★

An enjoyable interpretation of the national game, Emlyn Hughes' International Soccer shoots and scores!

STEG THE SLUG

CODEMASTERS ● £7.99 ● 0926 814132

IN BRIEF: One thing's for sure – no-one can accuse Codemasters of lack of imagination. This latest release has the player controlling a one-parent slug, who must use bionic body parts in order to feed his children. To catch grubs, he must blow bubbles which envelop them, then guide the bubbles past sharp objects by nudging or a quick blow. He can climb up walls and even along ceilings, which he'll have to do regularly if he wants to get the grubs to his hungry nippers. Steg can also collect special items along the way and enter secret rooms where he can earn extra points. At the end of each stage, bonus points are tallied and a password is given before moving on.

ST REVIEW COMMENT: "Codemasters are turning out some impressive budget software these days, and ***Steg The Slug*** is further proof that this budget company isn't just trying to make a quick buck off the back of duff product. Simple gameplay hides the fact that this is a demanding game. The cartoonish graphics are impressive enough, and although the opening levels are easy to complete, the game gets far tougher the further you get, with more children to save and trickier ways to save them. Altogether, a fine title from Codemasters – more of the same please."

★★★★

Slugging it out for the sake of his kids – that's Codemasters' slimy star, Steg.

MOONSHINE RACERS

GBH ● £7.99 ● 0742 753423

IN BRIEF: Make sure you've got a good supply of chewin' baccy before sitting down to play ***Moonshine Racers***! Ol' Man Tucker needs to deliver his illegal whisky to his customers across Tennessee, and it's up to Ike and Billy Joe to make sure it gets there – a good excuse for a multi-level 3D racing game if ever there was one.

But it's not all racing across the States – Sheriff Sam is hot on the trail of the boys and will stop at nothing to stop that moonshine reaching its eventual destination! Avoid the hazards on the road such as bindweed and police roadblocks, and of course the other road users and police patrol cars. At each drop-off point is a garage where new items can be bought to soup up your jalopy – and if you buy a turbo charger you can even use the moonshine as fuel! An interesting subject, but unfortunately only an average game.

Not a total disaster, but Moonshine Racers lacks the necessary "Yee-ha" to be worth the purchase.

ST REVIEW COMMENT: "The problem with ***Moonshine Racers*** is that it's too slow to be exciting, and even the add-ons fail to add any life to this lacklustre piece of software. There are much better examples of this genre on the market – GBH's own ***Lotus Esprit Turbo Challenge*** for one – and you'd be better off going for one of those."

✪✪✪

PRO TENNIS TOUR

HIT SQUAD ● £7.99 ● 061 832 6633

IN BRIEF: As these words are being written, a certain Mr Andre Agassi is lying prostrate on Centre Court, having just won the Final at Wimbledon. ***Pro Tennis Tour***, originally a full-price title from Ubi Soft but now nestling in the Hit Squad range, gives you the chance to do the same. A one- or two-player simulation, Pro Tennis Tour includes a number of options. There's the Tournament, which lets you tackle the four Grand Slam events; Wimbledon and the French, US and Australian Opens. Starting as a 64th ranked player, you must battle against allcomers to up your rating and, with a bit of luck and skill, maybe get through to and win the finals. If your serve and volley is a little rusty, take to the practice courts where you can work on your service or try out a few new returns with the mechanical server.

Low-quality serve-and-volley fare is in store for purchasers of Pro Tennis Tour.

ST REVIEW COMMENT: "***Pro Tennis Tour*** may have been the business when it was first released, but these days it's looking decidedly second rate. After only a few minutes' play, I found a way to beat all opposition quickly and easily, by playing one particular serve and standing close to the net – hardly challenging. Out of the two tennis games reviewed this issue, ***International 3D Tennis*** is most certainly the champion,. while ***Pro Tennis Tour*** leaves Centre Court with a consolation cheque and a small runner-up plate."

✪✪

BAD COMPANY

16 BIT POCKET POWER COLLECTION ● £2.80 ● 0734 574685

IN BRIEF: In terms of both presentation and gameplay, ***Bad Company*** bears more than a passing resemblance to the golden oldie ***Space Harrier***. You play the part of a member of Bad Company, and your mission is to wipe out all the aliens on Nu-World so that humans can colonise it and save the human race from extinction.The players (one or two) scroll into the screen just like in ***Space Harrier*** and mindlessly blast away the aliens which appear on the horizon. Starting off with just two weapons, there are extra supplies available in the form of bonus weapons which are dropped from the top of the screen and boost your firepower considerably. The trouble is, if you get hit you lose them and you're back to the standard blaster which is pretty poor when it comes to annihilating aliens.

ST REVIEW COMMENT: "This game is okay for a quick 10-minute thrash, but its lasting appeal is sorely lacking. It falls down because there is no variety in the game play and it is just too slow. But at only four quid nobody is going to be too disappointed – unless, that is, they get a copy like mine in which my energy level disappeared every time I played it, leaving me dead after a few seconds!"

✪

Bad Company: shades of Space Harrier.

KWIK SNAX

CODEMASTERS ● £7.99 ● 0926 814132

IN BRIEF: Sega has Sonic. Nintendo has Mario. Codemasters have Dizzy. The ovoid hero is back in ***Kwik Snax***, a title which bears no relation to the game itself. The Yolkfolk have annoyed the wizard Zaks by arguing too loudly over where to go on holiday, and he's cast a spell that sends them to different places. Denzil the Cool Egg has ended up in Iceland, dozy Dylan finds himself in Cloudland, Daisy is locked in Zak's dungeon, and senile old Grand Dizzy has been sent to Cuckooland! Someone has got to find them – and guess who that someone is? You're right; it's Dizzy to the rescue! This is a rather shallow plot – some would say patronising – for what is basically little more than a derivative of the ages old Pengy coin-op. Play involves collecting items from a single screen whilst pushing blocks to either open up a new route or to squash one of the patrolling meanies. Complete a level and you get to play a bonus game – more of the same but with no monsters and limited control over Dizzy.

Kwik Snax – a failed attempt at character branding.

ST REVIEW COMMENT: "Quite what Codemasters were thinking of when they released this is beyond me. Do they think a smiling egg is such strong branding that it will help shift untold copies of bland, shabby, unexciting product such as ***Kwik Snax***? It looks like they do!"

✪

PANG

ATARI ST REVIEW BUDGET BUY

HIT SQUAD ● £7.99 ● 061 832 6633

IN BRIEF: 1990 must go down as the year of the cute coin-op conversion. Ocean, who released more than their fair share of examples from this genre, came up with ***Pang***. Originally a Taito arcade game, ***Pang*** involves bursting balloons. No more, no less. Balloon frenzy has broken out in 17 different countries and it's up to young Pang to visit each one and pop the balloons before they take over the world or whatever they intend to do. At the start of the game, Pang is armed

Nice one, Hit Squad, for re-releasing this fine coin-op conversion we know quite simply as Pang.

with a harpoon which he can fire up in the air. If a balloon touches the wire on the harpoon it will burst and a smaller balloon will appear. There are four different sizes of balloon – very big, big, small and very small – and each is worth a certain amount of points when burst. Pang can collect new and more powerful weaponry throughout the proceedings. Double harpoons, laser guns and dynamite are all there for the taking, as well as egg-timers which slow down the balloons and clocks which stop them moving altogether.

ST REVIEW COMMENT: "Deceptively simple gameplay disguises Pang's incredibly addictive qualities. This looks, feels and plays like a console game, with cute sprites and hectic, fast-paced action that really gets the adrenalin flowing."

★★★★★

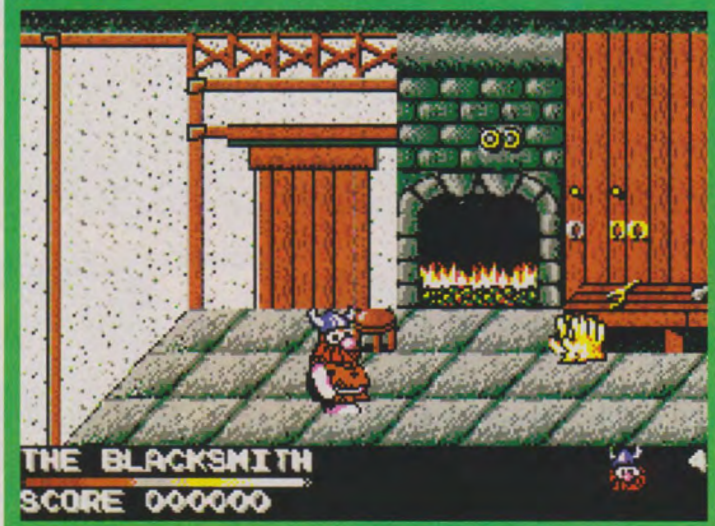
SPIKE IN TRANSYLVANIA

CODEMASTERS ● £7.99 ● 0926 814132

IN BRIEF: Not a smiling egg in sight in ***Spike In Transylvania***, one of the latest batch of new budget releases from Codemasters. Spike the Viking has been washed ashore after a particularly stormy North Sea crossing. Not too bad, you may think. And it wouldn't be, were the place he now finds himself not Transylvania! The crew of Spike's ship has been abducted and locked in a dark, damp dungeon in the local castle, famed for its less-than-friendly inhabitants including rats, bats and evil old farmer Piles! The task is to rescue Spike's scuppered ship-mates before the nasties get to them, using anything that looks remotely useful. Spike In Transylvania is standard collect-'em-up fare; move around the many screens and pick up and use objects to solve puzzles and progress further into the game.

ST REVIEW COMMENT: "This isn't going to test the avid adventurer to the limit – the cartoon graphics and relatively simple puzzles will appeal more to the younger gamer. ***Spike In Transylvania*** is a worthwhile buy if you want to dip your toes into this genre."

★★★



Jolly graphics and undemanding gameplay make Spike In Transylvania a good bet for the kids.

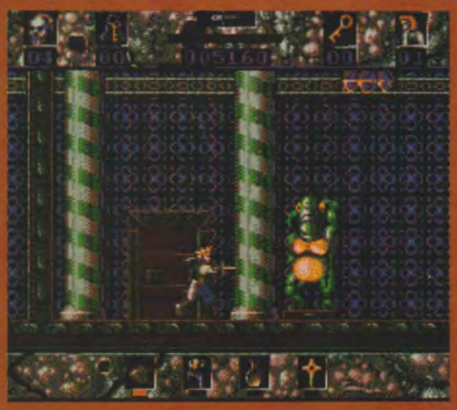
HORROR ZOMBIES FROM THE CRYPT

GBH ● £7.99 ● 0742 753423

IN BRIEF: If ghoulies, ghosties and things that go bump in the night tickle your fancy, then you might be interested in GBH's ***Horror Zombies From The Crypt***. A celebration of the horror movie genre, the game casts the player as Count Valdemar who, for reasons undisclosed, enters a strange old manor house and decides to collect the skulls of dead folk who have since turned into shuffling zombies. What this boils down to is over 100 rooms spanning six levels of arcade adventuring, with weapons to be picked up and countless denizens of the Netherworld to contend with, including old favourites like Dracula and Frankenstein. One hundred rooms which hold no interest or excitement whatsoever. And certainly no horror. I for one refuse to allow my spine to be chilled by the sight of a small digitised man ripping his own head from his shoulders when he comes into contact with a monster.

ST REVIEW COMMENT: "Uninspiring gameplay abounds in ***Horror Zombies From The Crypt***, and it's surprising that Millenium, the game's original publisher, who went on to create the excellent ***James Pond*** titles, could come up with something so mediocre. In fact, the only high point of the whole package was a small trivia section in the manual detailing some of the quirkier bits from horror movie history: did you know, for instance, that the first example of the horror film genre was a charming little piece in which two men – not actors – pummelled each other to death with sledgehammers? Beats playing ***Horror Zombies From The Crypt***."

★★



There's horror and there's horror. And Horror Zombies From The Crypt is just not very good.

ISHAR

Silmarils' fantasy epic features a huge, twisting plot – so if you're having trouble finding your way around, our handy hints to the first part of the game should set you on the right track

This solution does not take the hazards of fights into account. It is up to you to manage your team and your budget as best you can: dismissing or hiring team members, killings, return journeys to towns to eat, sleep, hire, buy things, take training courses or gather information.

WELCOME TO KENDORIA

DIFFICULTY 7 RATING

Head east for a meeting with Borminh. Borminh is a smooth talker – if you give him a little money, he'll tell you the names of a few good inns. You can enrol Borminh, but beware because he is a traitor: you had better not fall asleep in his presence. On the other hand, he could be very useful in fights to receive blows intended for others.

Carry on eastwards – near a pool, turn south and in the birch wood you can enrol Kiriela. Place Kiriela in the second line and prepare a fireball rune. Turn south-west again as far as the Angarahn village. Fight a few orcs and then visit the inn where you recruit Kirian, do some shopping, then visit the house of Akeer who tells you about the quest to be pursued. A course is also on offer in the village.

Continue to the south-west, skirt the bushes to the west – there are a few fierce orcs to be killed – go into the house and recover the treasure. On the way back, pick up the teleporter which is to the east of the house on the other side of the bushes (you have to go round these).

Teleport. Turn south-east, cross the bridge and beware of the Barbarian, he's a tough guy (a few fireballs should sort him out). In Lake City you will find a merchant, a course and two inns. Don't enrol Golnol and Nasheer in the team – they are traitors. Leave the city, head south along the river and take the first bridge.

LOOKING FOR WHITE IRON

The psychoanalyst's hut is to the south and the reptile's hut is near to the night-prowlers. In this hut, the message will be found uncoded if one of the team members is highly skilled in languages.In the bush is a purse full of gold coins. Travel east as far as Rhudgast- due north as far as the ocean, return westward to Osghirod and, in the bushes, a knight in armour "White Iron", is waiting for you. Kill him and take his helmet. Then

go east, right to Rhudgast.

THE DUNGEON OF RHUDGAST

Head south as far as the river, then travel up-river to the east – there are dwarves to be disposed of on the way. In a while you will find a purse: pick it up and turn north, then take a few steps to the west and you will be in front of the entrance to the fortress – go in. The fortress is divided roughly into two halves, east and west, the division being at the first crossing.

In the eastern part, release the handle to enter the north, where you will find several labyrinths containing treasures and quite a few skeletons. These labyrinths lead eventually to the north-east corner of the fortress and a room with a key and treasure to be recovered. Beware, in this eastern part you may find a handle. Don't open it because it jams and you will be imprisoned in the fortress (unless you are exceptionally skilled at lock-picking, in which case you may try your luck at un-jamming the door handle). In the western part you will eventually reach a large room with two entrances to the north-the western access will lead you to a runic tablet. By way of a few spider bites, the eastern access enables you to reach the magical phial which is essential for the rest of the game. Be careful which route you take – at the exit to the crossroads a very fit giant could cause a lot of damage. Leave the fortress, return to Osghirod, travel alongside the river to the west and take the bridge which separates Osghirod from Lotharia.

SAFARI TO LOTHARIA

Enter the village to the west – there are a few panther trophies to be had on the way. You will find:an inn, a merchant (mace) and a spell making course. Travel due south as far as the ocean, then west along the coast. Among the four birch trees, the spirit of Azalhgorm appears and gives you some information. Set off again due east, still going along the beach – eat the wild sempiternals and find and pick up a runic tablet on a pedestal.

ON THE PREDATOR'S LAND

Put the mental vision helmet on the head of one of your characters, then travel east to Fimnuirh (if you haven't put on the mental vision helmet, the predator will remain invisible and will attack you for as long as you remain in the forest). In the middle of the forest, to the east, you come to a clearing. In the middle of this clearing stands an isolated tree surrounded by little flowers – the predator should be waiting for you there, if it isn't there, go west again – you should find it. Kill the predator and collect four magic rings which will protect you from dragon's fire. Travel north as far as the river. Walk along it to the east, where you will come to a bridge – cross it.

THE GUARDIAN OF THE BRIDGE

Rhudgast entails a two-way journey with a village and in particular a lake. This journey could be a good idea for the rest of the program, but still keep at least 5,000 gold pieces.Turn east and enter Aragarth, then continue east as far as the river. This river is crossed by a bridge, which is ruled over by a minotaur. To the north of this bridge, find a merchant. Give him 5,000 gold pieces and he will give you a potion which is essential for inventing an eye-opening prescription. To the south of the bridge, the dwarf Fragorn can be enrolled if need be. He is quite a rough character, but beggars can't be choosers. Turn right onto the bridge to kill the minotaur. It's better to make him waste all his magic weapons and projectiles from a distance before the hand-to-hand fight. Kill the minotaur, cross the bridge and enter Simatil.

THE GUARDIAN OF THE TORTOISE:

Travel north-east to the end of the land, where the giant Gato awaits you with his mace. Kill Gato and pick up the tortoise Ygwen which is on the beach. You can try to dodge Gato and go and pick up the tortoise while avoiding the mace blows – you know someone who managed it. Go south again, but be careful – belligerent warriors are waiting for you on the plain. Travel south-east to the Urshurak – continue southwards and skirt the ramparts until you come to the city gate. Enter the city.

JON THE ALCHEMIST

Go west and enter Kandomir – on the highway there are orcs to blow up. Enter the hut, take a parchment from Jon (it contains magic prescriptions connected with those given at the end of the game).

MORGULA THE WITCH

A useful team member has been transformed into a pig by the evil magic of Krogh. So, do not kill the sweet little pig. Rather mix an "Arbool" potion in the magic phial you picked up in the Dungeon of Rhudgast. Find the pig by travelling east from the city of Valathar, till you reach the forest, travel south along the edge of the forest (where you will meet the merchant – he has something useful to sell), after meeting, go east into the forest, and you will find the pig.

MAKING MONEY!

The way to get money in the game is by killing people. However, if you attack a group of people you will notice that when you kill the first one they drop the money bag. If you now go on to kill the rest of the group, you will still only get that one money bag, but if you pick the money up and then go and kill another member of the group, then they will drop yet another money bag. You can continue doing this in turn and collect a bulging sack from each of your assailants.

Never be satisfied with the team that you have. Every time that you meet someone new, examine their statistics. If they are better than the weakest member of your group, then be ruthless. The stronger your team the better your chances of success.

Sometimes if you want to take on a new team member, your associates may vote against it. It may be to your benefit to kill a few of the dissenters in order to get your own way – but remember, before you kill them, strip their inventory bare. They won't be needing belongings where they're going.

When mixing magic potions look out for ARBOOL. This is the pig re-transformation potion which will turn the pig back into a witch who is an extremely useful addition to your team.

CREATE YOUR OWN STOS GAME: PART 5

Tony Dillon brings you the concluding part of our STOS tutorial, and shows you how to add all those professional touches to your Super Squirrel game

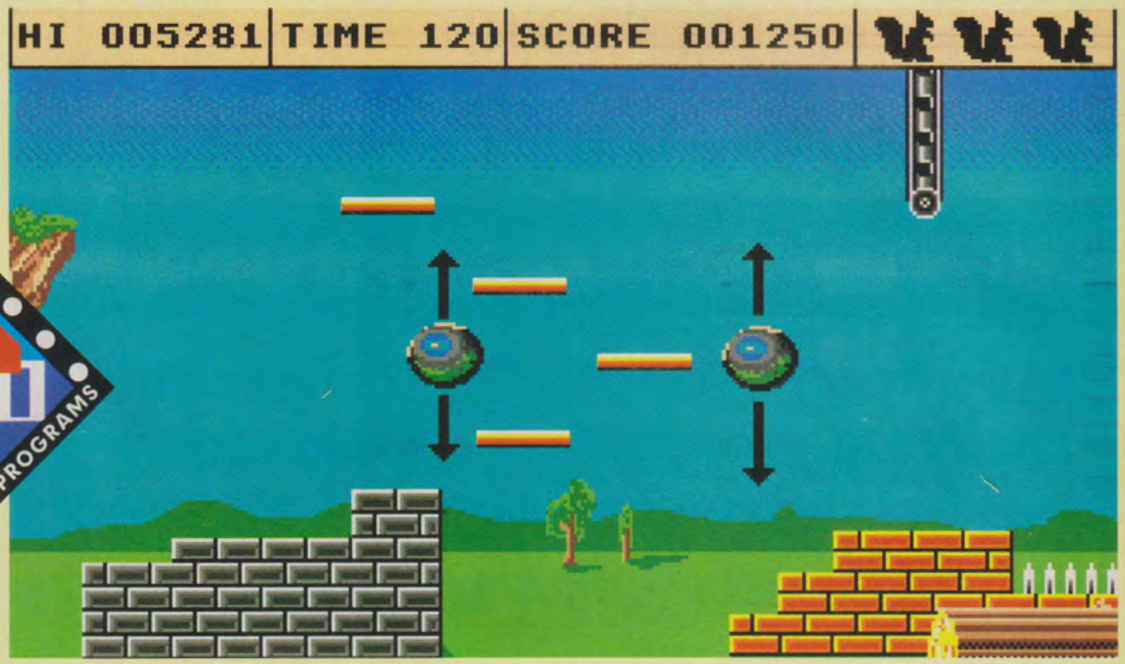
If you've been following the tutorial through the last four issues, you should now have a playable level of the game, minus all the little things such as obstacles. This month, we're going to show you how to add a little more danger, create some rewards and generally tie the whole game together.

SOMETHING TO DODGE

We're going to add a ball that bounces up and down through the middle of the cluster of platforms. To get past this, our hero will have to leap over or under it to get across the screen – colliding with it will create instant death, returning the player to the start position minus a life.

Firstly, you have to get your ball moving. This is done, as ever, with the Sprite X and Move X commands. Using your favourite art package, load up your backdrop and find the X (across) co-ordinate of a suitable position, and the upper and lower positions for the ball to bounce between. Now go back to ***STOS*** and add lines to place the ball in motion in the routine that places the platform. For example, if your X co-ordinate is 150 and your upper and lower figures are 50 and 150 respectively, then add the following lines. Change the line

Two likely positions for our bouncing ball. Remember, in our game the ball travels up and down, but there's no reason why you can't have it travelling sideways too.



The first finished screenshot from Super Squirrel. Note that on top of the ball, I have included some bouncing weights as extra enemies, and some acorns to collect. For the acorns, set a variable as SCORE, and using the collide instruction, increase the player's score every time they pass over one. To remove the acorn once the player has collected it, use the Sprite Off X command.

numbers to fit your own program.

```
30 Sprite X,150,50,Z (X is a spare Sprite number, Z is the number of the ball sprite)
40 Move Y X,"(2,2,50)(2,-2,50)"
```

Feel free to tailor the speed of the ball by changing the first figure within each set of parentheses.

SAVING LIVES

In order to have a lives counter, you'll need to set a variable. Variables are labelled areas of memory that store set information, which can then be manipulated and used in the same way as entering the information directly as part of an equation. For example:

```
10 Let A=10
20 Let B=2
30 Print A
31 Print B
32 Print A+B
33 Print A-B
```

For our program, we'll store the number in a file marked "Lives". Enter the following line as the first in your program:

```
1 Let Lives=5
```

Now we'll need to display a lives counter in the top left corner of the screen. Enter this line at the start of your program, just before the main control loop.

```
XX Locate 0,0:Print "LIVES: ";Lives (XX is the line number of your choice)
```

You should already have a routine that checks if the squirrel has fallen to the bottom of the screen. Add these lines to it:

```
XX Let Lives=Lives-1
XX Locate 0,0:Print "LIVES: ";Lives
```

You'll need a way of checking if all lives have run out. This is exceptionally easy. Just add a line at the start of your control loop that checks if Lives=0. If so, then jump to line 7000. For now, make line 7000 a Rem statement, to remind you to put the end game section there. For now, you'll find that if you die five times, the game will end.

DEATH FROM ABOVE

Now you're ready to add the collision detection lines for the ball. These lines are placed in the same loop as the screen zone detection lines, and branch to a new loop at line 8000. In this case, the ball is Sprite 6. Line numbers are omitted so that you can add them easily to your existing program.

```
XX If Collide (1,5,10)=6 then goto 8000
8000 Rem Hit!!!
8010 Boom:Boom:Boom
8020 Lives=Lives-1
8030 Locate 0,0:Print "LIVES: ";Lives
8040 X=(Initial starting X position)
8050 Y=(Initial starting Y position. Insert your own numbers here)
8060 Goto (Start of main control loop)
```

GAME OVER!

There are now only two main routines left to write, the intro and the game over sections. We'll begin with an intro screen. In professional games, you wouldn't expect the game to start playing as soon as you loaded it. The intermittant screen between loading and playing is what we are going to add, and like everything else in STOS, this is easy when you know how.

Firstly, create an intro screen using an art package. This doesn't have to be particularly flash. All I've done here is to darken the main backdrop colours and then drawn the title of the game over it in a bright, contrasting shade (yellow over dark blue). Save your screen out as "INTRO.PI1" and then add the following lines to your program:

```
2 Gosub 2000
8000 Rem Intro Screen
8010 Load "INTRO.PI1",1
8020 Rem waiting for joystick button
8030 If Fire then goto 8050
8040 Goto 8020
8050 Fade 2
8060 Wait 25
8070 Return
```

The new instruction here is Fade, which fades all colours on screen to black. The number after the command is the speed of the fade, and refers to the number of vertical blanks that must pass before the colours change by one step. Therefore, the higher the number the slower the fade. The Wait command immediately following it is to give the screen time to fade to complete blackness before loading the next picture.

For the Game Over effect, merely printing a "Game Over" message on screen will suffice, but we want to go a little better. You should already have line 7000 marked as the Game Over section. Add the following lines for a wacky effect:

```
7010 For A=1 to 100
7020 X=rnd(40)
7030 Y=rnd(30)
7040 I=rnd(15)
7050 P=rnd(15)
7060 Pen I:Paper P
7070 Locate X,Y:Print "-GAME OVER-"
7080 Next A
7090 Goto 2
```

EXPANDING

You should now know more than enough to expand the game, even adding animated enemies or giving the squirrel a weapon.

If you are having any particular difficulties with ***STOS***, or are having any trouble putting together your own version of ***Super Squirrel***, then drop me a line at the usual address.

STEP BY STEP

The intro screen may be something that you are inclined to overlook, but it's important to make a good impression from the beginning. Here's one way of doing it. . .

1 ***First you need to load in your background image into an art package and darken every colour in the palette making the whole image much dimmer. It will look even better if you turn the sky to black.***

2 ***Save that screen out and clear your canvas. Draw yourself a simple logo in a bright colour and add any other lettering you need, such as "PRESS FIRE TO PLAY". Save this screen out too and pick up the whole image as a brush.***

3 ***Now load in your new background and stamp your brush down in a suitable location. Easy as that!***

Family Roots

THE ELITE OF GENEALOGICAL SOFTWARE AT A PRICE EVERYONE CAN AFFORD.

After 3 years of development, Floppyshop are proud to present "Family Roots". The program is designed around a fully functioning integrated workbench which is ideal for both the serious user and beginner alike. The user creates his or her family tree graphically on the screen by linking directly between the individuals. The growing tree structure can be zoomed, scrolled, altered, scanned, printed, manipulated etc.

The powerful database can be viewed instantly at the click of a mouse button. Marriage partner(s), children and parents are all easily and instantly accessible. A built in powerful search function enables fast cross referencing and multiple scanning. On line help and information are available at all times, you don't have to worry about losing your place, the program remembers it for you. The printing section supports both graphics and text output.

To order your copy of Family Roots, send a cheque or postal order for £24.95 to the address below. Credit card orders welcome. A disk containing useable demos of Family Roots and other Floppyshop releases is available for only £1.00.

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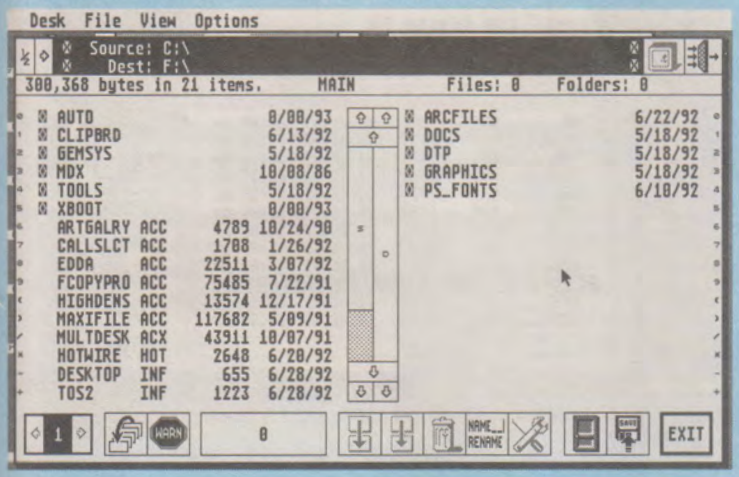
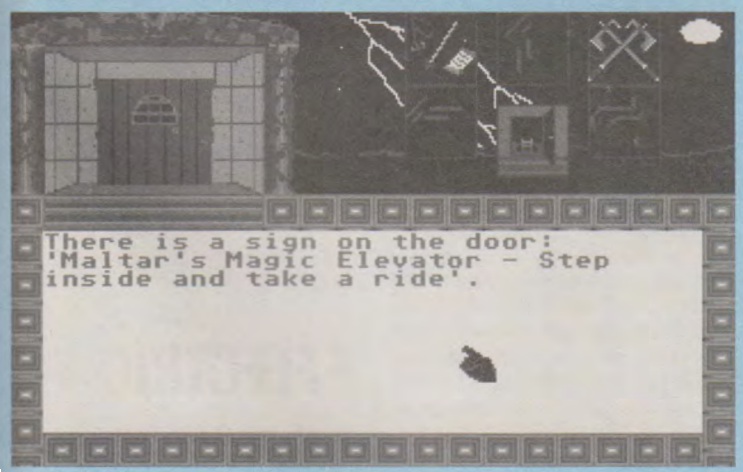
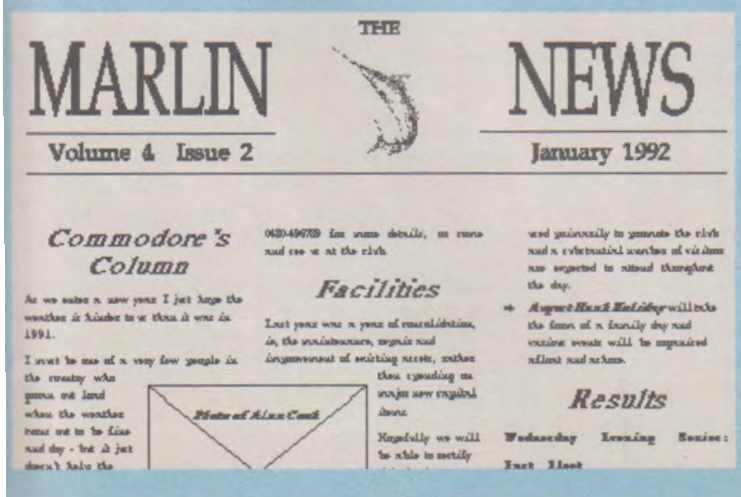
Floppyshop Dept STRev

PO Box 273, Aberdeen, AB9 8SJ. Tel: (0224) 586208

ST BUYER






THE MARLIN NEWS

Volume 4 Issue 2

January 1992

Commodore's Column

Facilities

Results

ST Review has got the Blues – but it's far from sad, with 32 pages full of all sorts of ways to squeeze yet more power out of your ST.

We continue our series on Powering Up Your ST. Last month we gave you Desk Accessories and now we add to them by looking at alternative ways to organise your files.

Or you could just browse through our monthly look at Public Domain programs – so cheap and yet so useful. Reviews of all the latest programs begins on page 120, covering office and business software, games and utilities. This includes a word processor, spreadsheets, databases, appointment calendars and the best screen grabber we've seen for some time.

If you enjoy reading our series on Timeworks 2 on page 132 but can't afford the £160 to buy the software then why not try to win one? See page 135 for details...

But don't forget the others pages; there's the comms pages, readers' letters, technical problems answered in Ask the Experts, a chance to Learn the Lingo, study the charts and see what the ST world is talking about with the Opinion pages.

The happiest people get the blues every month...

THE SELECT FEW

AUTO ON PROGRAMS

Andrew Wright looks at various replacements for the GEM file selector – and finds that they offer far more than just the choice of which file to load. . .

The improved but still rather boring file selector in TOS 1.4.

The file selector is a simple dialogue box that appears automatically every time that you try to load a file from inside a GEM program. Whenever you decide to open a new word processor file, for example, or load another music sample, the familiar dialogue box pops up, asking you to click on the file you want.

If you've got an ST with TOS 1.2, it will look rather bare. If you need to change the path from drive A to drive B or even C, D or E, for hard disk users, you have to erase the top line and type in a new path, including folders.

The introduction of TOS 1.4, followed by TOS 1.6 on the STE, saw an additional row of buttons appear on the file selector which made changing drives very easy. However, several enterprising software authors spotted the need for something a little more exciting – they reasoned that as the file selector was probably the most commonly used dialogue box, it ought to be able to do plenty of other things as well.

PATCH WORK

Replacement file selectors are really just system patches – they sit in memory and every time that the operating system requests the file selector, the replacement is called instead.

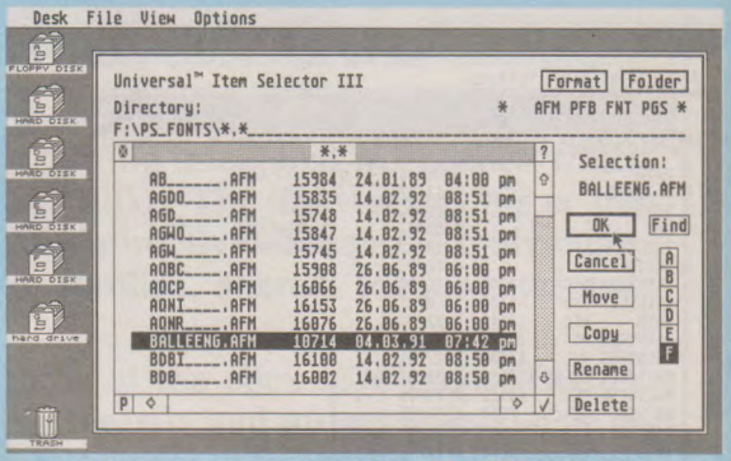
Actually, most of them go one better than that – why build all those extra goodies into a file selector and not be able to call it whenever you want it? No reason at all, so they are often provided with a small desk accessory program that actually calls the file selector whether the operating system thinks it needs it or not.

This offers another form of multitasking for ST owners as one program is temporarily suspended while another is used for various purposes. The better replacement file selectors can even replace many of the functions of the GEM desktop, often making it unnecessary to return to the desktop at all!

The real strength of the replacement file selector is that it can be called up from within any GEM program simply by accessing the menu bar and clicking on the relevant desk accessory. You can then carry out disk and file management operations without leaving the main program.

There are some programs, of course, which prefer you to use their own built-in file selectors, but the better ones such as ***That's Write*** will let you adopt your own replacement while others such as ***Redacteur*** insist you use the program's own.

Replacement file selectors are normally installed in the AUTO folder although they can also be installed from the desktop if subsequently required. Both ***UIS*** and ***Selectric*** are supplied with a very small accessory which will call the selector directly from within GEM programs or from the desktop.



Universal Item Selector – universal in that it does just about everything!

UNIVERSAL ITEM SELECTOR 3.32

ST CLUB ● 0602 410241 ● £19.95

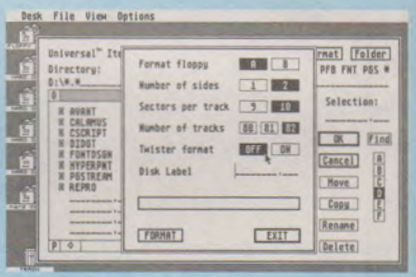
IN BRIEF: The ***Universal Item Selector***, or ***UIS***, has long enjoyed the admiration and support of many users. Now at version 3.32, it boasts some useful keyboard shortcuts and a number of other minor improvements.

It is the most comprehensive of all the available file selectors and has an extensive manual. It has been tested with virtually every major ST software package over the years and there are very few known incompatibilities.

It can take up virtually the whole screen or a strip similar to the standard GEM selector. Functions include disk formatting, including extended formats, the ability to reposition the selector anywhere on the screen, a small font to allow viewing twice as many files and the ability to print the names and sizes of all files in a given directory.

Files can be copied or moved, either in bulk or singly, by selecting them with the mouse, clicking on either "copy" or "move" and then selecting the target directory. This makes UIS particularly convenient for day-to-day file management, especially for hard disk owners.

ST REVIEW COMMENT: "The best replacement file selector per



The ability to format a disk at any time is a useful feature of UIS.

se, ***UIS 3*** does virtually everything you'll ever need to do from the GEM desktop from within almost any GEM program. The move and copy facilities are particularly useful and the price is reasonable for such well-proven quality software."

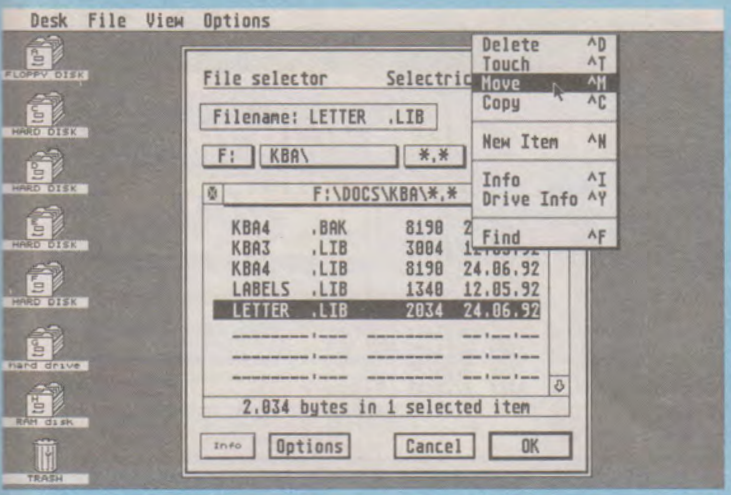
✪✪✪✪

SELECTRIC

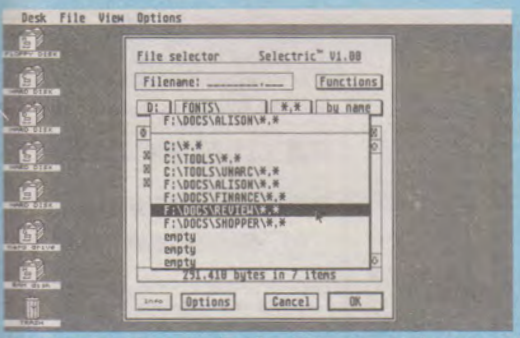
SOUTH WEST SOFTWARE LIBRARY ● SHAREWARE

IN BRIEF: To my mind, ***Selectric*** is the most attractive of the replacement file selectors and looks particularly good with the Gemini desktop. It isn't quite as easy to use as ***UIS***, owing to its unique user interface which depends on pop-up lists rather than the more commonly seen buttons used in the GEM file selector. Once you get used to this though, it's a lot more flexible than ***UIS***.

It has most of the same facilities, except for disk formatting and the ability to configure its size. It does, however, have other features such as the facility to hide or "touch" a file (change the date to the present without changing it) and sort items



Plenty of extra functions in Selectric – who needs the desktop?



Selectric makes it easy to select preset paths simply by clicking on the path line.

in reverse order whether by name, size, date or type.

Selectric lets you set up and save up to 10 user-defined paths that can be recalled quickly time and time again. Here it's useful to add all your data directories and clip art folders for rapid retrieval. ***UIS*** has the same feature but is a lot less easy to use.

Selectric also enables you to work more intuitively – you could move a batch of files from one directory to another, discover you need a folder to keep them in, create that folder, then dump the files into it, all without having to backtrack. Using ***UIS***, you'd have to cancel the first move operation, create the folder, then repeat the move.

ST REVIEW COMMENT: "This is a shareware program from Germany and one of the newest replacement file selectors. It has a unique interface, which looks particularly good with the Gemini replacement desktop, and some very attractive features. There is at least one bug – you can select another drive and find the old folder name still selected which does tend to confuse TOS somewhat (not to mention the user), but as it's the first version of a shareware program, it should be fixed soon." ✪✪✪

FSELECT

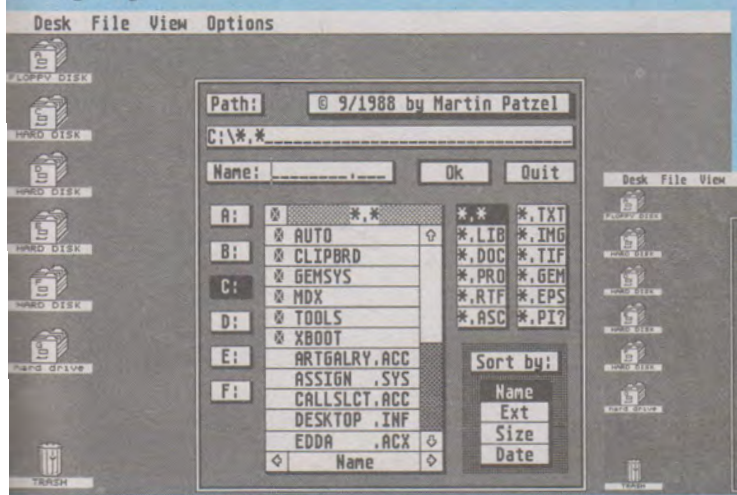
SOUTH WEST SOFTWARE LIBRARY ● FREEWARE

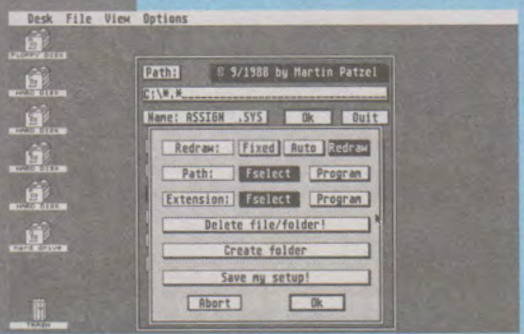
IN BRIEF: ***Fselect*** is one of the oldest replacements, yet it's still well used. It is nowhere near as attractive as ***UIS*** or ***Selectric***, but it is still packed with useful features. It can't format disks or copy, rename and move files but it can create new folders and delete existing files and folders. It is designed in a similar way to the GEM selector and is very easy to use.

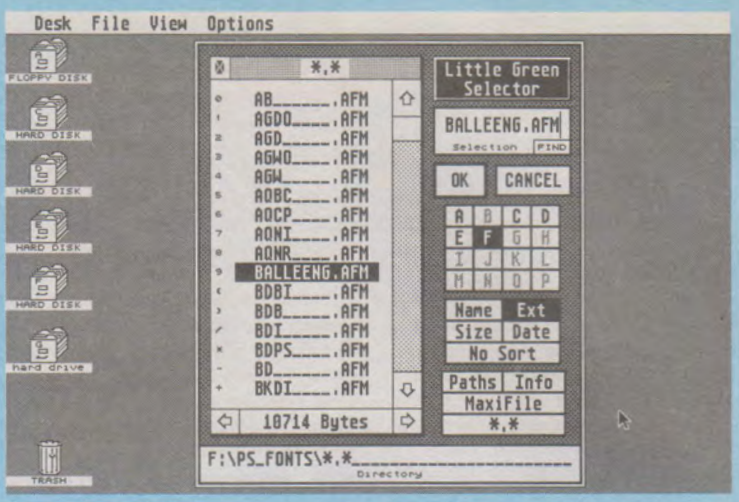
Up to 12 user-defined extenders can be set up and selected with a single mouse click for rapid searching and masking. Files can be sorted in the usual ways, and ***Fselect*** can also provide drive information (total capacity, space used, space free) by double clicking on the drive buttons.

ST REVIEW COMMENT: "In its favour, ***Fselect*** takes up very little RAM and is freeware – there's no obligation to register with the author – but its lack of move/copy, rename and search functions and inability to save paths makes it less useful than some others." ✪✪✪

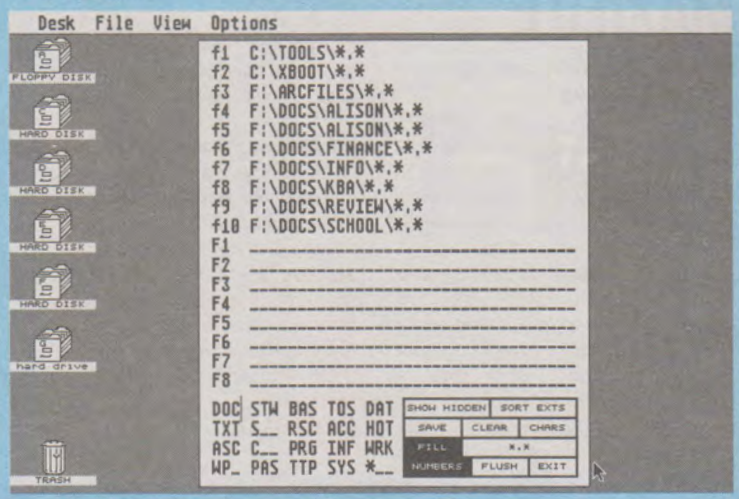
Fselect: taking up little RAM, this freeware program is well worth investigating.







Little Green Selector – notice the direct link to Maxifile if it's installed.



Up to 18 paths can be defined and saved in LGS, ready to be accessed at the press of a function key combination.

LITTLE GREEN SELECTOR

SOUTH WEST SOFTWARE LIBRARY ● SHAREWARE

IN BRIEF: The oddly named ***Little Green Selector*** (***LGS***) is another shareware offering from the legendary ST programmer Charles F Johnson. It has even less to offer than ***Fselect***, in many ways, being devoid of basic file management functions such as copy, move and rename files or even create folders. It does, however, have one useful feature – a link with Codehead's ***Maxifile*** that gives it all the missing features and more besides.

LGS is supplied with English on-disk documentation and will sort files in the usual way as well as allowing paths to be set up and saved for future use. They can then be retrieved by pressing various

function key combinations – a very quick and powerful way of locating files. It also has a useful file search feature, drive information, keyboard shortcuts and the ability to save the complete setup.

ST REVIEW COMMENT: "As replacement file selectors go, ***LGS*** is purely that. It is intended mainly for ***Maxifile*** users, such a combination being the most powerful around provided you can suffer the loss of over 200K of RAM. Even on its own it takes up 46K of RAM – and there's little return on the investment when compared to ***UIS*** or ***Selectric***."

✪✪✪

MAXIFILE

SYSTEM SOLUTIONS ● 0753 832212 ● £29.95

ATARI ST USER ESSENTIAL BUY

IN BRIEF: ***Maxifile*** is very hard to classify. It's a large, powerful desk accessory that provides file copying and management functions akin to those available on the desktop. In fact, it's almost a replacement desktop in itself rather than a replacement file selector as it is never called by an application when a data file is required.

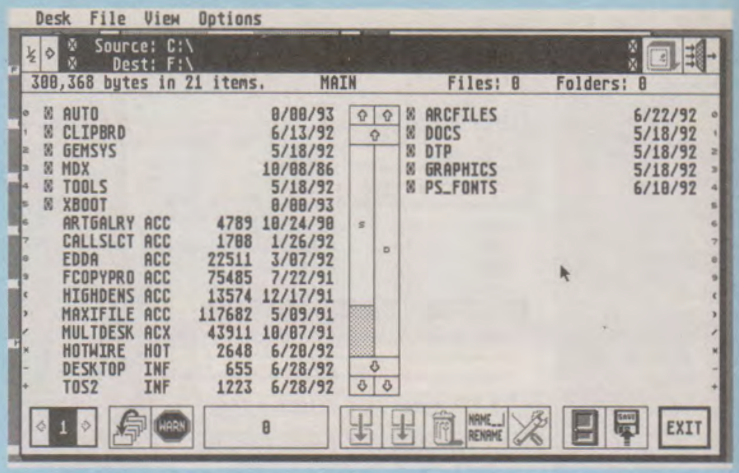
It does come into the category, however, of replacement file selectors when it is used in conjunction with the ***Little Green Selector***. The two complement each other nicely to provide just about every function imaginable from graphic displays of free disk space to MS-DOS disk formatting.

Maxifile is a superb utility that is well worth investigating. It can copy files, move them, delete them individually or in bulk with or without a recoverable "trashcan" while viewing both the source and destination directories at the same time. It can also format disks to many extended formats, including MS-DOS compatibility, copy disks, set the mouse acceleration and view text files.

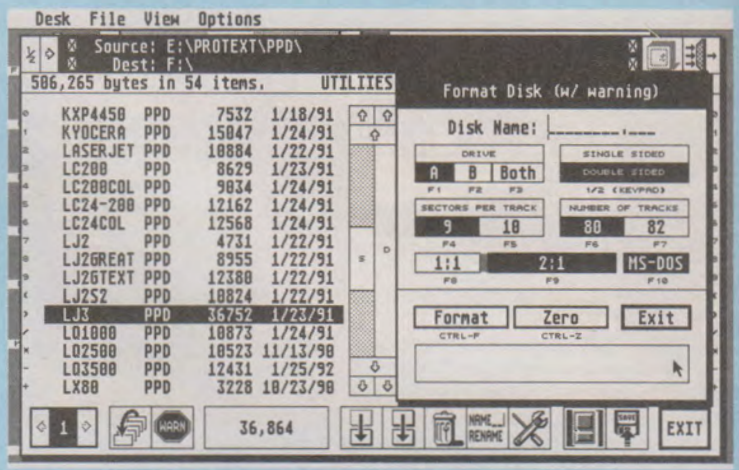
The search facilities are particularly powerful, allowing you to search for files created between certain dates or with other specified parameters.

ST REVIEW COMMENT: "***Maxifile*** isn't strictly a replacement file selector although it can be called from within ***LGS***, a powerful combination. The added features of ***Maxifile***, such as the ability to view text files, copy disks and select all files in a directory, make it more of a replacement desktop – it really is the ultimate file management accessory."

✪✪✪✪✪



Maxifile: is it a file selector or is it a replacement desktop?



Imagine having all this at your fingertips?

BUYERS GUIDE

	UNIVERSAL ITEM SELECTOR 3.32	SELECTRIC 1.0	LITTLE GREEN SELECTOR 1.8C	FSELECT V7	MAXIFILE III
Machine required	Any 520 ST/STE	Any 520 ST/STE	Any 520 ST/STE	Any 520 ST/STE	Any 520 ST/STE
Documentation	English manual	German text file on disk	English manual on disk	English manual on disk	English manual
RAM used	44K	60K	46K	17K	166K
Installation	Run from GEM desktop/AUTO folder	Run from GEM desktop/AUTO folder	Run from GEM desktop/AUTO folder	Run from GEM desktop/AUTO folder	Run from GEM desktop or as accessory
Accessory mode	Accessory supplied	Accessory supplied	Yes but not supplied	Yes but not supplied	Yes
Preset extenders	5	11	20	12	16
Preset paths	*	*	*		
Sort/unsort files	Both	Both	Both	Sort only	Both
Window size	User defined	Three columns	One column	One column	User defined
Screen fonts	Standard and small	Standard	Standard	Standard	Standard
Save configuration	*	*	*	*	*
Create/delete files/folders	*	*		*	*
Move files/folders	*	*			*
Hide files	*	*			*
Touch files	*	*			*
Search facility	*	*	*		*
Drive info	*	*	*	*	*
Keyboard shortcuts	*	*	*		*
Format floppy	* (1)				* (2)

(1) (80-82 tracks, 9/10 sectors) (2) (80/82 tracks, 9/10 sectors or MS-DOS)

ARE YOU CRAZY?

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Characters between asterixes show special requirements: *M* = Mono Res, *C* = Colour Res, *D* = Double Sided Disk, *X* 1 Meg Ram, *S* = Not STE/Rainbow TOS

DESK ACCESSORIES & UTILITIES

U001 Dir printer, RAMdisks, Snapshot screen save. Desk Acc. loader.
U003 Desk. ACCs formatter, calendar, Disk Manager, calculator
U008 68000 Assembler, Address/Mailing List, Autodial Utility
U009 PICSWITCH 7 changes pics graphics res. Mono/colour emulators. SWITCHER, 2 progs in memory FSEL 5.5
U010 STE BOOT UP, boot medium res
U014 ARC file compiler. BI CLOCK set time/date. MONOEMUlator v5.0.
U016 IBM compatible disk formatter. ARC SHELL v1.91, MEGA formatter
U019 DRFLOPPY, disk editor, SCODE make ASCII for data transfer
U023 Packed with various progs for printing all kinds of labels *M*
U024 CHK 2.3, All you'd need to know about a disk. IBM MODIFIER, alter DS Atari disks for use on IBMs.
U027 ANTIDOTE, detect & kill most bootsector viruses.
U028 DISKMECH disk analyser/archiver/editor, edit/format sectors etc. full docs. CPANEL
U030 AMC GDOS
U032 MOUSE TRICKS, extensive control over mouse, movement etc.
U033 MX-2 v2.3 a multi-tasking environment, up to 7 concurrent tasks. *D*
U034 DOUBLE CLICK format v3. 03 9/10 sectors, 80/82 tracks.
U035 DEC edit clone. Disk engineer v3.01 do alsorts to a disk via GEM.
U040 AUTOGEM autoboots Gem programs. VC Spreadsheet non-GEM.
U041 ADDRESS LOG, Address book & label printer, disk cataloguer.
U046 SUPERVKILLER detects 5 viruses, 7 anti-viruses.
U050 GEMINI Desktop replacement. English version *DXS*
U052 GEM PLUS. Neodesk variant.
U057 GEMDOS USER GUIDE, full of info about GEM-DOS
U058 ATARI TOS 1.4 bug fixes (STFMs with Rainbow TOS)
U059 XCONTROL ATARI'S latest TT control panel accessory for all STs.
U063 MEMFILE 2.0. Memory and disk editor with powerful features.
U065 STDCAT v4.0, disk catalogue.
U067 ARCSHELL v3.0, Arc V6.0
U068 HITCHHIKERS PD shareware disk 2.0
U069 ST Zine shell, Disk mag development tool.
U070 SUPERB Intro creator, sprite, pics, text & music
U073 SUPERBOOT V7.0
U075 ST TOOLS, many features
U077 GOODIES, multiple featured desk accessory
U080 JAMES, the desktop butler.

GRAPHIC, FONT AND ART/DRAWING DISKS

A005 PALART, excellent art program with full doc files. *C*
A009 COLUMBIA, Drawing prog, some 3D elements. Studio (*X*), Drawing package. Both German
A012 DOODLE, mono & colour versions. Also some Mandelzoom pics.
A013 ST GRAPH. Comprehensive graph prog, handles bar, horizontal/stacked bar, line & dot charts.
A015 FONTS2, 7 screen/desktop fonts, inc. Columbia, Devoll, Hudson
A018 CANVAS, great art package
A020 PALETTE MASTER, art package, up to 512 colours. *C*
A024 FRACKTAL drawing program from Germany. Mono/Col.
A025 FONTKIT 3.31 *D*
A027 ANI-ST, ex-commercial package, quality animation system
A029 MASTERPAINT drawing package, excellent, Mono & Col.
A030 PICWORKS, enlarge/reformat pics up to 3 times normal size. *M*
A034 PUBLIC PAINTER. *M*
A036 SNOOPY cartoon pics. *C*
A042 ST CAD v2.1, a med/high res CAD package. Full docs. CALC-PLOT, scientific calculator
A043 THE ARTIST, Great drawing package with many options. *M*
A048 JIL CAD, Shareware. *XD*
A053 MOVIE CONSTRUCTOR, FACE ANIMATOR. *M*
A054 SIMPLE DRAW v3.4, art package. Docs foreign. Med/Hi-res
A059 MASTER DOODLE, shareware art package for the younger user.

CLIP ART

C002 Human figures, cartoons, titles.
C003 Sports figures, July 4th logos.
C010 Occasional Clips, Characters etc.
C011 Loads more fruit, vegetables.
C012 Herbs & Kitchen parts.
C013 Humorous clips, Letters A-Z.
C015 Babies, boys and girls
C016 Girls, Scrolls and Occasional Clips
C017 Artdeco, Baby boy & girl
C018 Varied Humorous Clips.

WORDPROCESSING & DESKTOP PUBLISHING

W001-006 TEX. 6 Disk Pack, document processor. *M*
W008 1st WORD wordprocessor. Professional fully GEM based
W009 Easy Text v1.2 fully working DTP demo (w010 for DS users)
W013 STPAGE, super fast editor
W015 HYPERTEXT. Shareware prog. Produce professional docs. *MD*
W017 ST Writer Elite V4.1 top quality wordprocessor
W018 WORD 400, Desk Accessory WPR. Fully featured

PROGRAMMING/LANGUAGE DISKS

P001 68000 Assembler
P002 STOS SOUND FX creator.
P008-P10C LANGUAGE DISKS 1, 2 & 3 of Elementary C, a set of 3 disks.
P012 CPM EMULATOR, CPM-8 v 2.0.
P013 CPM UTILITIES for P012.
P017 PROGRAMMING EDITORS; CONTEXT v2, PRO-ED & P-EDIT, full docs.
P019 Nigel Smith's ST 6800 pop-up ref. guide.
P020 SOZOBON C, Great C compiler *D*
P022 SPRITE EDITOR. Create and save sprites.
P023 C TUTORIAL, disk manual
P026 MKRSC a simple GEM resource construction utility.
P027 MODPAS, Pascal Compiler. *D*
P029 GFA EXPERT, all you need to know about GFA v3 basic.

GAMES DISKS (colour unless stated)

G001 Warzone, Daleks, etc.
G014 SUPERBREAKOUT, 40+ brick types with special features. *M*
G016 NAPOLEON, wargame sim. *M*
G017 EMPIRE BUILDER property developer. LOST TREASURE & JUMPSTER
G018 RUSH, move bricks to create a way out for the ball.
G020 YAHTZEE, popular game.
G021 UPSTARTshoot cherries. *S*
G022 COMPANION shoot 'em up in outer space
G025 ENGLAND Team Manager
G027 DIE ALIEN BLOB, a great shoot 'em up, excellent graphics.
G028 TREASURE SEARCH, find the hidden treasure. *SD*
G033 ADVENTURE WRITING SYSTEM
G037 TUNNEL VISION, maze game
G038 BERMUDA RACE 2
G039 INVASION, adventure
G041 Hack! is a D&D adv.
G045 AYATOLLA, terrorists attack. *S*
G046 ROBOTZ, 40 levels, great
G047 FRUIT MACHINE simulator
G056 SLIDE, 3 levs, puzzle. *S*
G063 SOLITAIR 3D graphics. Macpan. Galaxy & Sprengmeister. *M*
G064 ATOMS mentally challenging, KILLERCHESS fast & furious, AMMOTRACK'S a superb race & blast 'em.
G068 SKIDPAN, motor racing. *S*
G069 STOCKMARKET, Wheel & Deal. Galactice Warriors, shoot 'em-up.
G084 FLOYD THE DROYD, ultra fast shoot 'em-up. Sampled sound.
G085 AIR WARRIOR, Flight sim
G086 COMPUTER PINBALL. DEVASTATOR, 3D strategy game.
G090 TALESPIN, Wolf and 7 kids
G092 FUZZBALL platform game
G093 SHIPWRECK, educational maths with graphics. *S*
G094 ZOG a great blasting game. SUPER SENSORI.
G095 A DUDLEY DILEMMA, adv.
G097 WIZZARD'S LAIR adv.
G098 UNDER BERKWOOD Massive graphic adventure
G100 NAVAL BATTLE, Battleships
G102 CENTAURI, shoot 'em up.
G106 VIRUS, great graphics & sound. *S*
G108 FLYOVER, bombing raid
G109 GLOB, you collect cherry cakes while avoiding pursuers.
G111 TRACKER, you drive your tracker through enemy territory.
G112 OVERLANDER, shoot 'em up.
G113 CHANCE, battle the Archons.
G114 ESCAPE FROM THE TOMB OF RA.
G115 MUTANT, reactor out of control, workers mutate.
G116 KEY TO ATLANTIS, underwater scrolling shoot 'em up.
G118 MARS MAZE, platform game.
G119 STEEL, blast everything.
G122 HEDGEHOG, Frogger clone. *S*
G123 THE NAME GAME, +editor.
G128 TARK, great text adventure
G129 BATTLE FOR THE THRONE.
G130 LLAMATRON, a great Shareware game by Geoff Minter. *D*
G131 VIDEO POKER: Las Vegas poker playing machine.
G132 DERRICK THE DROID: platform, shoot 'em up & puzzle game in one.
G136 PORK II: ZORK send up.
G137 MORIA: Fantasy RPG. *D*
G138 SHOOT 'EM UP BUILDER KIT. *D*
G141 DUNGEON!: Multi choice fantasy adventure with some humour.
G144 HACKMAN, 50 levels, Pacman clone. *S*
G145 ELVEN CRYSTALS II: Adv
G149 STARMAZE: Various levels, blast alien craft on your way.
G150 A NIGHT ON THE TOWN adv.
G151 TILE GAME, rearrange the letters. *S*
G152 SOKO, 50 levs maze/puzzle
G153 MEGAROIDS, RIPCORD, SPACEWAR, BUGS
G154 BATTLE SCAPE 2 player fantasy war-gaming.
G155 FRUSTRATION, CRISSCROSS.
G156 BACKGAMMON, POKER SQ'D
G158 FLY ROBIN, SANTAS WORKSHOP
G159 PENGUIN, excellent shareware
G160 CROCODILES PASTIMES.
G162 REVENGE OF THE MUTANT CAMELS 1 or 2 players.
G164 SPACE INVADERS, a classic
G165 BLOCKADE, Qix clone
G167 TENNIS great graphics/gameplay.
G169 ROCKFALL, boulderdash type.
G172 ENTOMBED, platform 5 levels.
G176 ARMOURLYTE, horizontal scrolling shoot 'em-up.
G177 GRAV, rotate & thrust.
G178 MAZE, split screen, 2 players + editor, great.
G181 OZONE, platform/puzzle, many enemies, shareware game.
G182 PDBOLD, excellent Arkanoid clone, colour & mono. *DX*
G183 INFILTRATION, defeat the aliens, shareware.

APPLICATIONS – Spreadsheets, Databases etc.

S001 DATABASE 1, GEM driven database.
S002 ST SHEET, quality spreadsheet *C*
S005 B/STAT v2.01, sophisticated graphing & stat analysis. *DX*
S007 OPUS v2.2, GEM based spreadsheet & charting program. *DX*
S009 WG DATA, high quality DTB. Full docs.
S011 DOUBLE SENTRY, fully working accounts package (no VAT)
S012 PERSONNEL DTB, Names & addresses DTB.
S013 INVENTORY PRO V2.0 stock control system.
S014 TCOS, tree structured DTB.
S015 ZAPCARD easy to use card type DTB.
S016 SHEET V2, spreadsheet. Similar to Lotus 123. docs.
S017 DATAPLOT, sophisticated data plotting package.
S019 FASTBASE, absolutely brilliant, sophisticated shareware database. Excellent features.

GULF TORNADO £1.99 (not PD)
Great scrolling shoot 'em up. Blast those Migs and Missile launchers with your fighter/bomber. 1 or 2 players

COMMUNICATIONS DISKS

CD001 PACK-ET-TERM v3.3a, radio package with docs.
CD005 UNITERM v2.0a with auto-dialler & phone book.
CD006 VANTERM 3.71 & 3.8 great communications package.
CD009 HAGTERM ELITE v3.3 powerful shareware comms package

MUSIC

M001 COMPOSER, music creation.
M008 KEYBOARD program, various songs & samples.
M012 SINGING CALIFORNIAN RAISONS. *X*
M013 MUSIC WRITER, create music.
M016 CASIO CZ SOUNDS & EDITOR
M020 XBIOS Music Const. Kit
M021 PERCUSSAMAN, 4 track, 16 instrument, synthesised sequencer.
M022 SOUNDTRACKER PLAYER & MODULES. D_DREAD 1, D_DREAD 2, PAT_MIX, RVB_DEMO, SPREAD.
M025 MFP, Music design package. *DXM*
M026 CHORDEX tool for learning major/minor chord shapes.
M029 MIDI v2.0 monitor, Med/High res. Shareware EX800 v2.0.
M031 DBRK4802, daybreak step time sequencer v.3.
M035 ACCOMPANIST 2.4, 16 voice shareware sequencer.
M040 EDSYNTH 1.2 music synthesiser.

EDUCATIONAL

E002 WORLD MAP GAME
E004 Spelling Made easy
E005 REBUS WRITER, design & print rebuses. Samples included.
E006 BARNYARD, pair the animals from memory. *C*
E007 WELCOME TO CHEMISTRY V2. *S*
E008 CHUNNEL, A French to English & vice-versa tutorial game. *C*
E010 PERFECT MATCH , PENTOMINOES
E011 TYPING TUTOR (2) with full documentation.
E013 MATHS MADE EASY
E014 KIDGRAPH, KIDMUSIC, KIDPIANO, KIDPOTATO *C*
E015 KIDPUBLISHER, KIDSONG
E016 DOT 2 DOT, includes creator.
E019 SOLAR SYSTEM GEOGRAPHY
E020 GEOGRAPHY TUTOR
E021 ZOO MAKER, you're asked questions, the computer tries to guess the animal.
E022 ME FIRST, BUTTERFLY IN THE PARK.
E023 COLOURING BOOK.

GENERAL

F003 SKY MAP, display over 1500 stars.
F005 CONSTELLATIONS, A comprehensive astronomers disk *M*
F006 PLANETARIUM, get stats on almost any planet or moon.
F009 THE PLANETS. *D*
F012 AUTOROUTE, working demo covering the south of England.
F013 POOLWISE V3.5, pools predictor, MED RES.
F016 ST TOUR, guided tour.
F017 YOUR SECOND ATARI MANUAL.
F018 NEWGEN V4, shareware, 10 record limit.
F020 ST TECHNICAL MANUALS.
F021 BUSINESS LETTERS, 100 business style letters in ASCII code.
F022 ASSISTANT CHEF, 142 recipes + add your own.
F023 ASTRO 22, Astrology
F026-28 A ROMAN MYSTERY, graphic art images, Roman magazine, Graphic database with a murder investigation, plus more. *3 disks*
F029 COMPACT OFFICE MANAGEMENT, excellent accounting program for small business and sole traders. Comprehensive. *D*

DEMO'S

D005 THE DEFINITIVE DEMO. *D*
D006 SLATATANIC CULT, Music Demo I & II. *D*
D007 ASTERIX DEMO.
D008 BOMB THE BASS.
D009 TRANSYLVANIA DEMO. *D*
D010 SOUND CONNEXIONS. *D*
D011 THE NEW YEAR DEMO. *D*
D012 STINGRAY DEMO.
D017 COUNTERPOINT DEMO.
D018 CUDDLY DEMOS. *S*
D019 MASTERSOUNDS DEMO.
D020 ROBOMIX DEMO.
D021 STAR WARS DEMO.

PRICING

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Anyone who's involved in running a company of any size will know the difference that good business software can make – and the Public Domain has a whole host of programs on offer to make those everyday administrative jobs that bit easier. . .

OFFICE WORKERS

DB WRITER V1.0

ATARI ST REVIEW BUDGET BUY

FLOPPYSHOP ● DISK NO: WRD.3124M ● £2.50 ● MEMORY 0.5MB ● MONO ONLY ● PUBLIC DOMAIN

IN BRIEF: ***DB Writer*** is a combined word processor/database. The database is a simple address book, but you can use it to customise letters from the word processor in the database. ***DB Writer*** uses its own custom written interface which is similar to GEM. Most commands are entered using the mouse or keyboard shortcuts but some specialised sub-menus can only be called up via the keyboard. Powerful operations combine with many new features to make this the best word processor in Public Domain. Some extras include the ability to produce two-column text, a page preview mode, a calendar, a word counter, custom rulers, text macros and a clipboard to store blocks for pasting between two documents.

Although one Megabyte of memory is recommended, ***DB Writer*** will run on a 0.5 Megabyte machine, but you won't be able to use the 40,000 word spell checker.

ST REVIEW COMMENT: *"**DB Writer** represents a major breakthrough in word processing for the Public Domain. This is the only word processor available in Public Domain which includes a built-in spell checker."*

✪✪✪✪✪

SUPERCARD 2

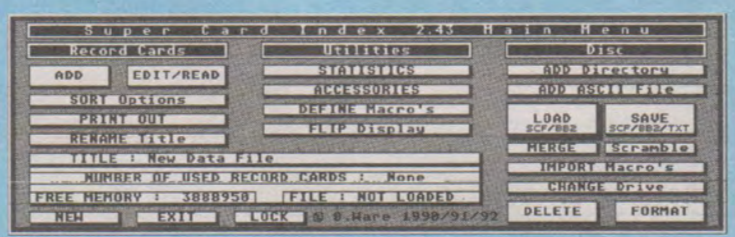
FLOPPYSHOP ● DISK NO: UTL.396 ● £2.50 ● MEMORY 0.5MB ● SHAREWARE

IN BRIEF: ***Supercard 2*** is a free form card index program and is closer to a manual card filing system than to a computer database. This gives it more flexibility as records don't need to be of a fixed length and detailed notes may be included with the record. Any word within any card may be searched for and this takes seven to 10 seconds.

You can specify wildcards in your search and choose whether or not it is to be case dependent. The ability to search a specified range of cards as opposed to the entire file, can speed up searches dramatically. Print-out is particularly flexible: users can specify the control codes for their own printer, enabling the use of condensed, wide, proportional spacing, underline, bold and so on. You can also load ASCII text into ***Supercard*** and convert it to a ***Supercard*** record.

ST REVIEW COMMENT: "This was originally a commercial release and has been upgraded and re-released as Shareware. It is suited to businesses which are used to the traditional card index filing system."

✪✪✪✪✪



The main menu of Supercard 2 is feature packed with many buttons leading to sub menus.

OPUS V2.2

ATARI ST REVIEW BUDGET BUY

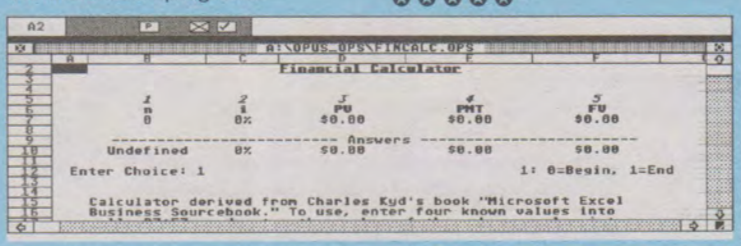
PROPHECY PDL ● DISK NO: BUS002 ● £1.25 + 50p P&P ● MEMORY 1MB ● SHAREWARE

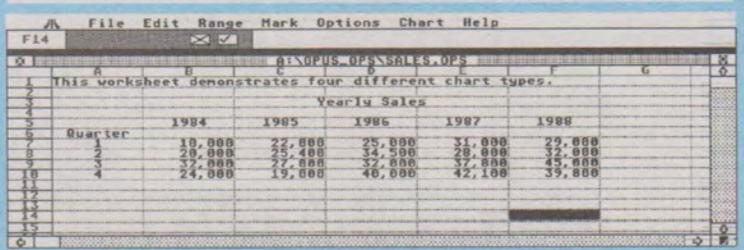
IN BRIEF: ***Opus*** has been around for a few years but remains the best Shareware spreadsheet for professional use. It can perform 81 different statistical functions on your data and is fully GEM-based for ease of use. Files are saved in its own format but may be imported in ***Lotus 1-2-3***, ***VIP Professional WKS*** and ***WK1*** formats.

In addition to all the normal features of a basic spreadsheet and more complex ones that are usually only found in professional packages, ***Opus*** can display and print out area charts, pie charts, bar charts, stacked bar charts, line graphs, scatter plots and make use of different fonts in the spreadsheet. The graphs generated may also be saved as GEM Metafiles. These extras are only available if ***GDOS*** is installed. This is not supplied, but there is a ***GDOS*** clone and there are plenty of ***GDOS*** fonts in the Public Domain. Installing ***GDOS*** and associated files is made easy using the installation programs.

ST REVIEW COMMENT: *"**Opus** compares favourably with the best commercial spreadsheets and outclasses many of them. It is squarely aimed at the business user and although easy to use, it is really over-specified for home use."*

✪✪✪✪✪





Opus is one of the most robust spreadsheets on the market.

TOP TEN

1

DIVERT 2 ● 16/32 PDL ● DISK NO: UTIL 028 ● £2.00 ● MEMORY 0.5MB ● SHAREWARE

Divert 2 is a handy program which allows calls to one drive to be diverted to another drive of your choosing. This is especially useful if you are running a program from a hard drive, ramdisk or Drive B, which insists in reading its data files from Drive A.

2

FASTBASE ● CALEDONIA PDL ● DISK NO: AU-130 ● £2.50 ● MEMORY 0.5MB ● SHAREWARE

A full-featured database which handles graphics as well as text and supports ***GDOS*** output. Comprehensive, yet easy to use. Record storage is limited in this Shareware version.

CALENDAR V6.02

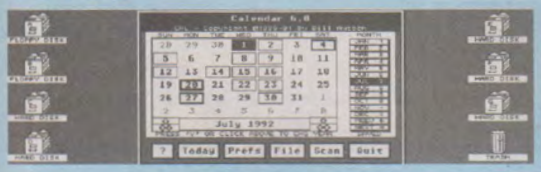
ATARI ST REVIEW BUDGET BUY

16/32 PDL ● DISK NO:GEN 055 ● £2.00 ● MEMORY 0.5MB ● SHAREWARE

IN BRIEF: ***Calendar*** has evolved into a highly proficient diary and appointment reminder. It is most useful when run as an ACC as it can be called up from within any GEM-based program. However, it may be run as a normal program. Events are marked with a priority level and may be recurring or one-offs. You can step through the days, months and years at the click of a mouse button. If you have a clock card fitted, ***Calendar*** reads the current date and time, otherwise you must set this these manually. Notes up to three lines long may be attached to each event and the day's events are displayed on boot up if the accompanying program ***Calshow*** is in an Auto folder.

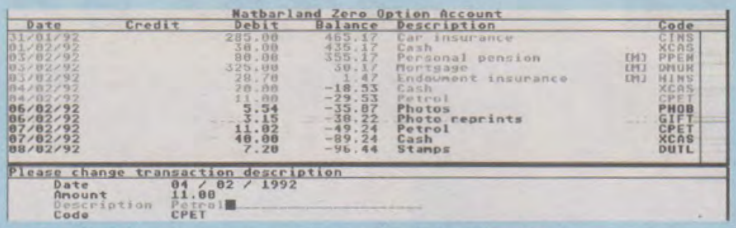
ST REVIEW COMMENT: "This is one of the best diary/reminder programs available and is invaluable in both the home and the office."

✪✪✪✪✪



Calendar has a host of features, all of which are easily accessible with a few simple mouse clicks.

ACCOUNTABILITY



Individual entries from any account are easily edited.

L.A.P.D. ● DISK NO: M.106 ● £2.00 ● MEMORY 0.5MB ● COLOUR ONLY ● SHAREWARE

IN BRIEF: ***Accountability*** is primarily a comprehensive home accounts package, although it could be used equally well for a small business that is just starting out. The only foreseeable problem in a business environment is the absence of VAT reconciliation facilities. However, a small business may trade for some time before reaching the VAT threshold and this program could fit the bill in the interim.

Accountability allows up to 10 accounts to be kept in each file, with no limit on the number of files. Each file can hold up to 2,000 transactions which may be split, according to your preference, between the 10 files. Regular monthly, bi-monthly, quarterly, half-yearly and annual debits and credits can be entered and your balance will automatically adjust to take account of these on the appropriate dates.

Almost any type of report imaginable may be generated and sent to screen or printer. Bank and credit card statements, amongst others, can be easily cross checked against your accounts.

ST REVIEW COMMENT: "This is the newest and possibly the best home/small business accounts package on the Shareware scene. The on-disk manual is well-written and includes an in-depth tutorial."

✪✪✪✪✪

DESKPAC PLUS

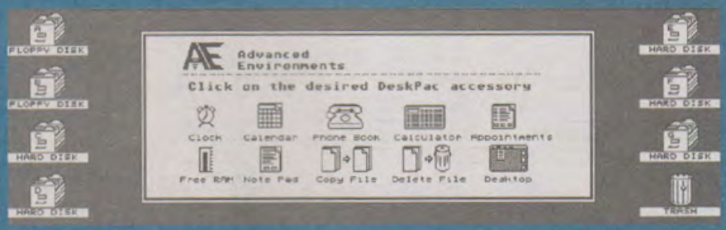
ATARI ST REVIEW BUDGET BUY

FLOPPYSHOP ● DISK NO: UTL.177 ● £2.50 ● MEMORY 0.5MB ● SHAREWARE

IN BRIEF: ***Deskpac Plus*** is a multi-function desk accessory. It takes up a single ACC slot and consists of a calendar, appointment book, notepad, clock, telephone book and calculator. The phone book allows you to time calls and auto-dial numbers. The notepad can be called up at any time and notes may be saved to disk or printed out. The calculator has the facility to convert binary, octal, decimal and hex to and from each other as well as all the usual functions. You can also copy or delete files and check how much free memory your system has.

ST REVIEW COMMENT: "Integrated packages have never really caught on with regard to the ST. However, this one really is the cream of the crop and no serious user can afford to be without it."

✪✪✪✪✪



Deskpac Plus offers a host of useful options from the Desktop or within any GEM-based application.

OFFICE UTILITIES

3

GUTENBERG ● ST CLUB ● DISK NO: WPR86 ● £1.45 + 50p P&P ● MEMORY 0.5MB ● SHAREWARE

Gutenberg generates NLQ output from any Epson compatible 9-pin printer. Various fonts are supplied along with a font editor. High-resolution monitor required.

4

MULTI-LAN ● FLOPPYSHOP ● DISK NO: UTL.423 ● £2.50 ● MEMORY 0.5MB ● SHAREWARE

This is a Desk Accessory which allows you to translate German to English and vice versa (the dictionaries required for this are supplied with the program). ***Multi-Lan*** can convert between up to nine languages depending on dictionaries present.

5

DESK SWITCH ● 16/32 PDL ● DISK NO: UTIL 028 ● £2.00 ● MEMORY 0.5MB ● SHAREWARE

Desk Switch allows you to edit any DESKTOP.INF file easily and re-save it. It also lets you load up and install a previously saved DESKTOP.INF file without re-booting. Several .INF files can be present on a disk and swapped between as you want to.

6

CALAMUS SUPPORT DISK ● CALEDONIA PDL ● DISK NO: DTP-27 ● £2.50 ● MEMORY 1MB ● SHAREWARE

This disk contains a selection of odds and ends which will prove useful to ***Calamus*** users. There's a description of the ***Calamus*** font format, fill patterns for ***Calamus SL***, 54 graphic files in CVG format, a utility for creating decorative borders and a new font.

7

PAGESTREAM 2 SUPPORT DISK ● CALEDONIA PDL ● DISK NO: DTP-26 ● £2.50 ● MEMORY 1MB ● SHAREWARE

This disk contains a selection of odds and ends which will prove useful to ***Pagestream*** users. Among these are a cassette template, a pantone palette for import, an ACC which gives easy access to ***Pagestream***'s special character set, and four colour printer drivers.

8

TOP DOWN ● 16/32 PDL ● DISK NO: UTIL 028 ● £2.00 ● MEMORY 0.5MB ● SHAREWARE

Top Down forces all Auto folder programs and desk accessories to load at the top end of memory. This allows badly behaved programs which insist on loading and running at specific addresses, to run properly with as many ACCs present as you like.

9

STE BOOT ● COMPUTE 'IN STYLE' ● DISK NO: M455 ● £1.99 ● MEMORY 0.5MB ● PUBLIC DOMAIN

A simple to use program which will load up a DESKTOP.INF file saved in medium res by TOS v1.6 (the first STEs) and patch it so that your STE will actually boot up correctly in medium res.

10

MIDINET ● FLOPPYSHOP ● DISK NO: UTL.3097 ● £2.50 ● MEMORY 0.5MB ● SHAREWARE

This software allows two STs to be networked together, via the Midi ports, allowing them to share the same disk drives.

It is particularly useful in an office which has two STs and only one hard drive.

PD ZONE

We continue our journey into the public domain with a look at the best of this month's games and utilities

BLAT

ATARIST REVIEW ESSENTIAL BUY

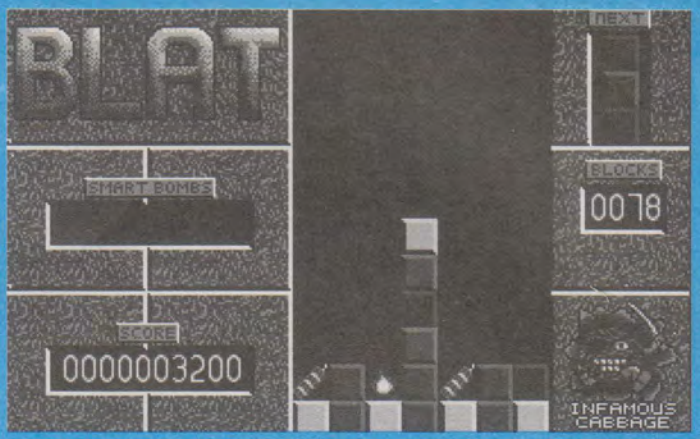
L.A.P.D. ● DISK NO: G.201 ● £2.00 ● MEMORY 0.5 MB ● STE ONLY ● PUBLIC DOMAIN

IN BRIEF: ***Blat*** is yet another variation on the ***Tetris*** theme. To call it a clone would be insulting as it's better written and has greater built-in variety than ***Tetris***. ***Blat*** requires an STE as the soundtrack is in stereo and it has several weird and wonderful sampled effects throughout.

As objects fall from above you must try to place blocks of the same colour next to each other. Use the joystick or keyboard to alter the order in which the colours/objects appear in the block. Lining up three objects in a row will cause them to be removed, resulting in a mini-avalanche. Line up five blocks in a row to get a smart bomb, and save these for later levels – you're going to need them! Other added features include positioning a flame next to a stick of dynamite, two clocks together, two bolts of lightning, or a hammer and an acid bottle. Each of these actions serves a useful purpose! As in ***Tetris***, the aim is, quite simply to prevent the pile of rubble reaching the top of the screen for as long as possible.

ST REVIEW COMMENT: "Don't dismiss ***Blat*** as just another ***Tetris*** game. It features 15 challenging levels which require a considerable amount of mental agility."

★★★★★



Blat is a well-presented Tetris clone with numerous extra features.

DUNGEON LORD

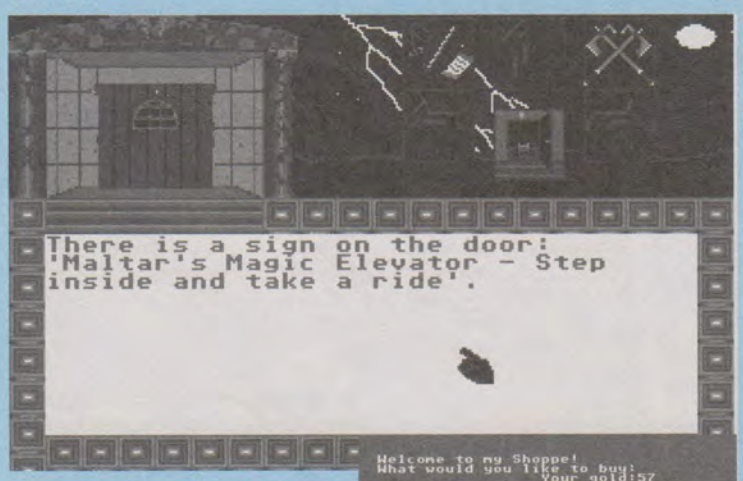
L.A.P.D. ● DISK NO: G.197 ● £2.00 ● MEMORY 1 MB ● SHAREWARE

IN BRIEF: ***Dungeon Lord*** is set in the far distant future where time travel is no longer a dream, but a reality. An interdimensional company, Interspace, sends agents into the past and the future to explore and protect the Universe. Whilst exploring the planet Thago, an agent is killed and his Dimensional Warp falls into the hands of Lord Shrax who uses it to enter unknown dimensions and summon demons. He is about to summon "The Evil One", a demon capable of destroying the entire Universe. Your mission is to locate and destroy Shrax quickly and save the Universe.

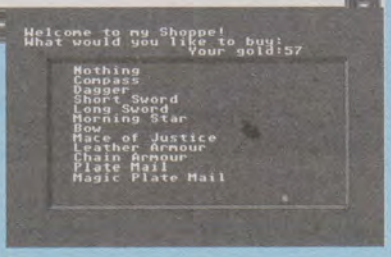
Dungeon Lord is, unsurprisingly, a ***Dungeon Master*** clone. Start off by creating a character to your liking. Move through the maze encountering evil creatures of every type. Fight them or dodge them and work your way through the levels. Killing a monster increases your experience points, building up your character for future challenges. There are 15 levels in all but only the first three are enabled in the Shareware version, with registered users getting the rest.

ST REVIEW COMMENT: "***Dungeon Lord*** is a must for all role-playing enthusiasts. The ability to save your game means you will get many weeks of enjoyment out of this one."

★★★★



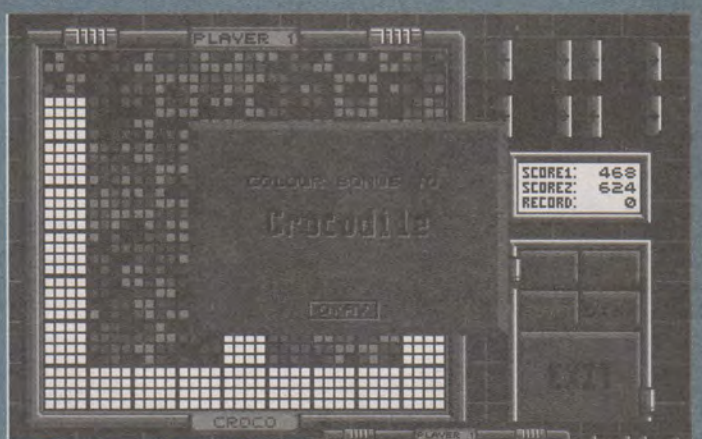
Dungeon Lord: as you can see, this is a well-designed Dungeon Master clone.



At the shop on the first level of the dungeon, you kit yourself out for the expedition ahead.

CROCODILE'S PASTIME

GOODMAN ENTERPRISES ● DISK NO: GD1486 ● £2.75 ● MEMORY 0.5MB ● PUBLIC DOMAIN



At the end of a game, the player who has placed the largest amount of a single colour gets a bonus added to their score.

Crocodile's Pastime is an original puzzle game.

IN BRIEF: ***Crocodile's Pastime*** is a mind-boggling puzzle game for one or two players, which is played with multi-coloured tiles. Each tile is made up of 16 small coloured squares. The game starts with one tile being placed in the centre of the board: to the right of which are four sets of tiles, the scoreboard and the game options.

Select a tile and drag it with the mouse to the centre of the screen. Match it up with any of the four sides of the tile on the board. At least one colour must match vertically or horizontally for your move to be legal. The more matches you make, the higher a score you achieve for that turn. If you are lucky and manage to complete the outline of a square, all in one colour, you will hear a bleep or two and be awarded a bonus. At the end of the game, the player who has matched the greatest percentage of a single colour gets a bonus of up to 60 points.

ST REVIEW COMMENT: "A completely original game which is difficult to describe but fun to play."

★★★★

PROBE ST V1.01

ATARI ST REVIEW ESSENTIAL BUY

CALEDONIA PDL ● DISK NO:AU-180 ● £2.50 ● MEMORY 0.5MB ● SHAREWARE

IN BRIEF: ***Probe ST*** arrived too late for inclusion in last month's screen grabbers feature, otherwise it would have come top of the poll. However, to describe it as a mere screen grabber would be somewhat unfair as it is really an all-rounder. *Probe* allows you to grab graphics, soundchip music by Count Zero, David Whittaker and Mad Max, find cheat codes in games, check disks for viruses, search/edit through memory or disk files and grab areas of memory or disk sectors into a single file. It is very easy to install and most options are easy to use.

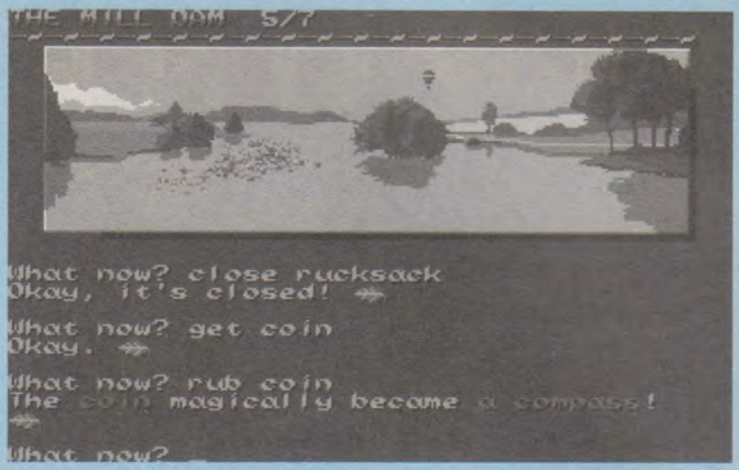
```
                WELCOME TO ProbeST V1.01
Key:            Function:
F1              Search Music
F2              Search Graphics
F3              Disk Operations
F4              Other Searches
F5              Disk/Memory Editor
F6              About ProbeST V1.00
F7              Options
F8              Virus Protector
F9              Extras
Esc             Quit
```

This is the main menu of Probe ST. All the sub menus may be accessed from here.

Probe can be run from the Desktop or from an Auto folder and the disk contains a sample file with a picture and some music for you to experiment with. It can search files, whole disks or even your machine's entire memory after a reset. The only option I found time-consuming was searching for graphics after a reset and finding the matching palette. However, it is well documented in the manual and it's just a case of following the instructions step by step.

ST REVIEW COMMENT: "A well documented, easy-to-use utility. As well as graphic and sound grabbing, it includes a powerful disk/memory editor and the ability to search for ASCII text."

✪✪✪✪✪



The Obscure Naturalist: the first screen of this game takes some clever thinking to get out of!

THE OBSCURE NATURALIST

GOODMAN ENTERPRISES ● DISK NO: GD1626 ● £2.75 ● MEMORY 0.5 MB ● SHAREWARE.

IN BRIEF: ***The Obscure Naturalist*** is a graphic adventure created using ***STAC*** (given away free with ***ST Review*** issue 3). You are an obscure naturalist whose aim is to become the next David Attenborough as you try to get a shot of (not at) a rare heron with her chicks.

The only problem with this little plan is that the heron is in her nest on an island in the middle of the lake. Although your binoculars give you a great view, you can't get close enough with your camera to get a clear shot.

You start the adventure at the side of the lake and must work out how to get close enough to the nest without disturbing its occupants. The puzzles include finding the camera and a film for it and getting across to the island.

At first you seem to be trapped at the lakeside and are unable to proceed in any direction except into the water. As you can't swim, you could have problems here! This is part one of a massive Shareware adventure. Registered users get the second part.

ST REVIEW COMMENT: ***"The Obscure Naturalist*** features excellent graphics and some very well-written text. However, the beginner is unlikely to find his way out of the first location!"

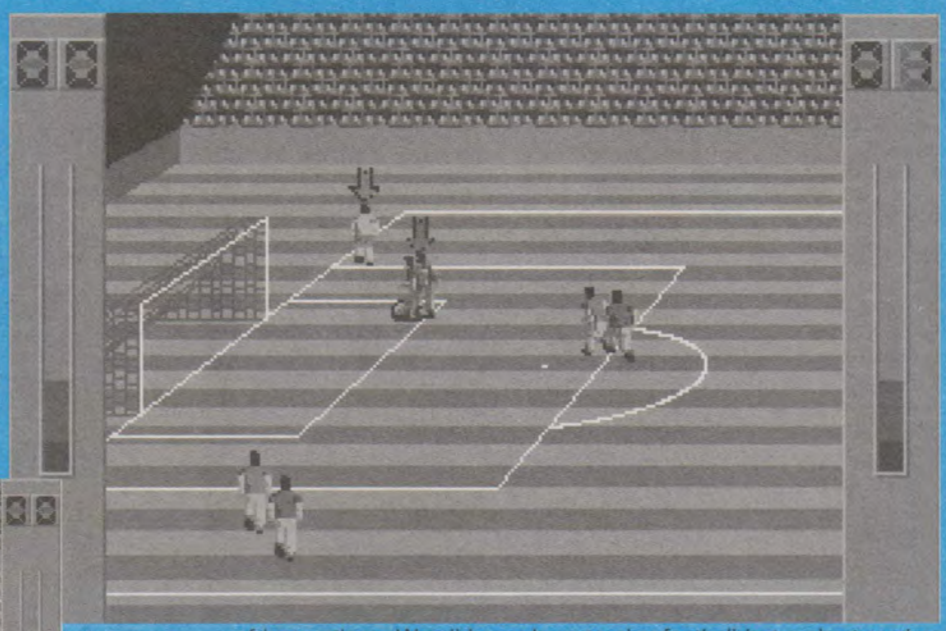
✪✪✪

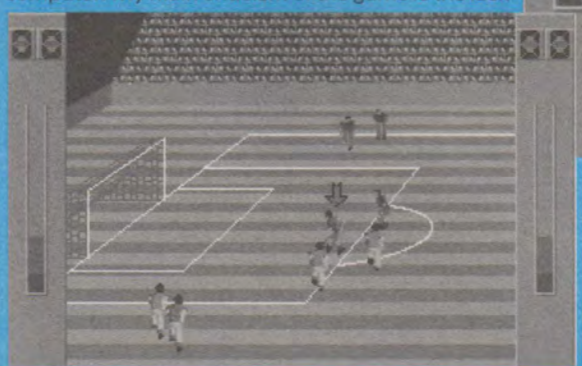
SOCCER

MERLIN PD ● DISK NO: MPD 0554 ● £0.99+60p P&P ● MEMORY 0.5 MB ● PUBLIC DOMAIN.

IN BRIEF: This is a two-player football game, requiring two joysticks, which is reminiscent of ***International Soccer*** on the Commodore 64. The footballer from each team who is nearest to the ball is the "active" one and has a red or blue arrow above his head. This is the player you control and all others are computer controlled, merely following the ball. The game is played in two halves with each half lasting about five minutes. At half-time the teams swap sides.

This is a great game to play against a friend but it could have had more widespread appeal if it had a one player option, with you playing against the computer. My main criticism of the game is the lack of instructions. We all know how to play football but a short readme would have been welcome. Also, a high score table would have given the game a more challenging atmosphere.





Soccer: the coloured arrows show the active players.

ST REVIEW COMMENT: ***"Soccer*** is fun to play against a friend. It is well animated and easy, but just seems to lack that something special."

✪✪

PD ZONE

SPECCODE DEMO

SUPPLIED BY AUTHOR ● AVAILABLE FROM MOST PD LIBRARIES ● MEMORY 0.5 MB ● COLOUR ONLY ● SHAREWARE

ATARI ST USER ESSENTIAL BUY

IN BRIEF: If you've ever wanted to show Spectrum 512 pictures from within ***STOS Basic***, then this is just what you've been waiting for. It consists of two short programs, one in ***STOS Basic*** and another in machine code. Load the example program into ***STOS Basic*** and run it. A file selector appears, which allows you to load and display a Spectrum 512 picture. Press SPACE to quit back to the file selector. Now list the program to see how it's done.

The listing gives full details of how to incorporate the loading of Spectrum 512 files into your own programs. As the name suggests, this is a demo version and a message appears after each picture is displayed, informing the user that he is using the demo version. The only limitations are those imposed by ***STOS Basic***. It would not be possible to play Tracker music or sampled sound due to the amount of processor time needed.

ST REVIEW COMMENT: "This is a fairly robust program which performs its function well. However, its use would be limited to creating slideshows and such like."

✪✪✪✪✪

VIDEO MASTER

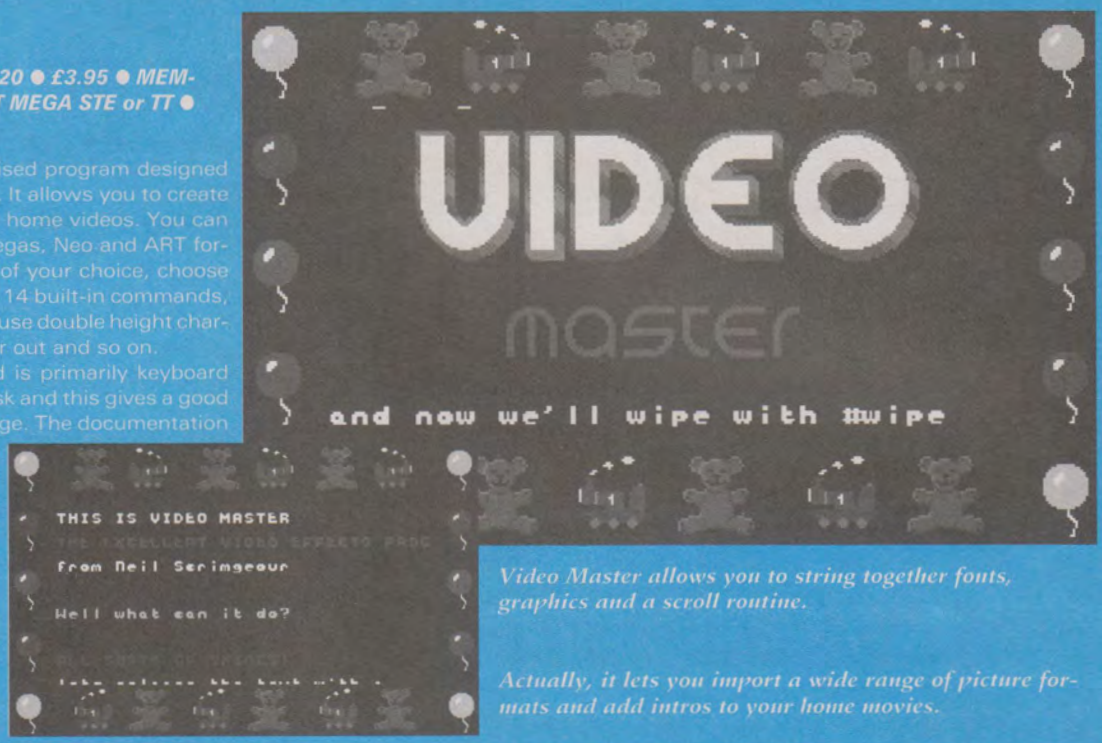
NEW AGE PDL ● DISK NO: BUPRO 20 ● £3.95 ● MEMORY 0.5MB ● COLOUR ONLY ● NOT MEGA STE or TT ● LICENCEWARE

IN BRIEF: ***Video Master*** is a specialised program designed for Jeremy Beadle fans everywhere. It allows you to create introductory sequences suitable for home videos. You can load up any background picture (Degas, Neo and ART formats are supported), add a border of your choice, choose a font and you're ready to go. Using 14 built-in commands, you can scroll your text up or down, use double height characters, centre text, pause, fade in or out and so on.

Video Master has two menus and is primarily keyboard driven. A demo file is supplied on disk and this gives a good indication of the power of the package. The documentation is brief, to say the least, and could have gone into more detail on the use of the commands. The menus hardly get a mention and should ideally have had each option detailed separately.

ST REVIEW COMMENT: "A quality product which is badly let down by inadequate documentation."

✪✪✪



Video Master allows you to string together fonts, graphics and a scroll routine.

Actually, it lets you import a wide range of picture formats and add intros to your home movies.

PRO BINGO CALLER

RIVERDENE PDL ● PRO 22 ● £3.95 ● MEMORY 0.5MB ● LICENCEWARE

IN BRIEF: ***Pro Bingo Caller*** is a difficult program to categorise as it crosses the boundary between games and utilities. The program starts off with the option of printing out books of bingo cards. The user must specify how many books are required and how many pages are to be in each book. A four-digit security code is added to prevent books that were printed for a previous session being re-used. The books can be printed out to any printer. If you already have bingo books, this option may be bypassed.

Pro Bingo asks you for a few details about what type of game is being played and how many games are in the books. As a number is called, a box is drawn round it and your screen displays the current number as well as a tally of the total numbers called. You can play for one line, two lines or a full house and the program will inform the caller when all games have been played.

ST REVIEW COMMENT: "An ideal program for small clubs who do not have the funds to purchase a bingo machine. The program is very well presented but strikes me as having a limited appeal."

✪✪✪

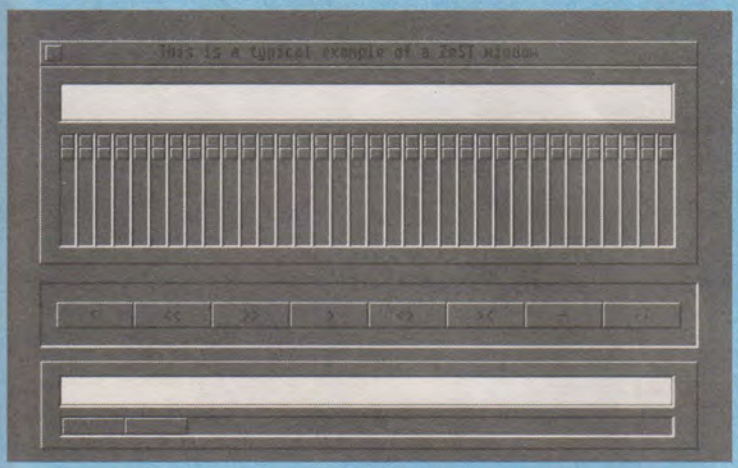
After having printed out the Bingo cards, the numbers are randomly selected by the computer.

AUTO ZEST

CALEDONIA PDL ● DISK NO: AU-173 ● £2.50 ● MEMORY 0.5MB ● MONO ONLY ● PUBLIC DOMAIN

IN BRIEF: ***ZeST*** is a graphic interface which is modelled on the one used on the NeXT computers. It is written in ***GFA Basic*** and can be used as an attractive front end to your own programs.

The first release gave GFA source code for you to work with yourself, but the process was a bit of a hit or a miss situation. ***Auto ZeST***, however, automates the process entirely by allowing you to create ***ZeST*** screens,



The example provided with Auto ZeST gives you some idea of the sort of user interface you can add to your GFA Basic programs.

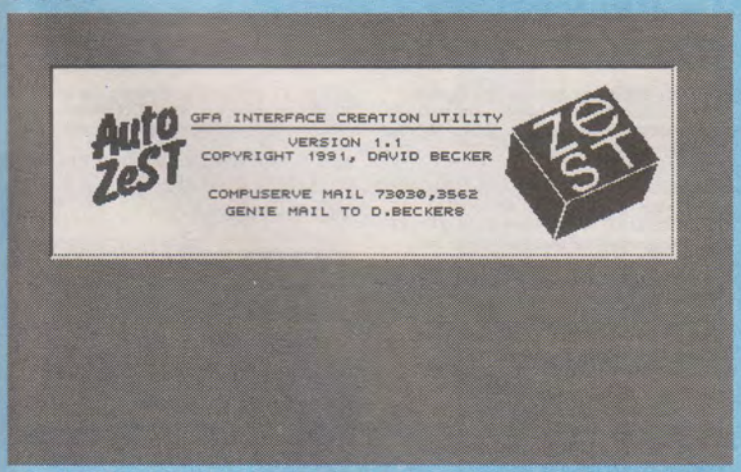
front ends, windows, buttons, boxes and sliders easily on screen using the mouse. The result is then saved as a ***GFA Basic*** LST file and can be merged directly into your own programs.

ZeST windows can't be moved like GEM windows, but to counterbalance that, they may contain as many objects as you like. ***ZeST*** features 3D buttons which push in and text boxes which have a "carved" look to them.

As you can see from the screenshot above, it is a very attractive interface to work with. The documentation on disk is well written and easy to follow and the source code produced is fully commented.

ST REVIEW COMMENT: "If you are a mono user and program in ***GFA Basic***, this program is guaranteed to add a bit of sparkle to your programs."

✪✪✪✪



The ZeST logo may be incorporated into your own programs to give them that professional look.

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TOP TEN GAMES AND UTILITIES

1

DIZZY LIZZY • ST ADVENTURERS PDL • DISK NO: BU.40 • £2.95 • MEMORY 0.5MB • LICENCEWARE

This is a highly original adaptation of the ***Boulderdash*** theme. The sound, graphics and gameplay combine to make it a classic in its own right. Dodge the rock falls and collect the diamonds to proceed to the next level. A password is given for each level, enabling you to restart from the same point at a later date.

2

DISKMECH • COMPUTE "IN STYLE" • DISK NO: M455 • £1.99 • MEMORY 0.5MB • SHAREWARE

Diskmech was one of the first disk sector editors on the Shareware scene. It is very powerful and easy to use. However, you should always work on a backup copy. If you know what you are doing, you can rescue corrupt FATs, create custom disk formats and so on.

3

FONECOST • RIVERDENE PDL • DISK NO: UTL 963 • £2.50 • MEMORY 0.5MB • SHAREWARE

Calculate the costs of your telephone calls with this handy ACC. Set for charge band, charge rate and switch the timer on. ***Fonecost*** does the rest. A Shareware release with more options for registered users.

4

BALLZONE • RIVERDENE PDL • DISK NO: BU 7 • £2.95 • MEMORY 0.5MB • LICENCEWARE

This was one of the first ***Arkanoid*** clones and it remains the best. It is a multi-level bat and ball game in which you must clear the coloured blocks from the screen to progress to the next level. You battle against the clock and are awarded a bonus at the end of each level. ***Ballzone*** has good graphics and an excellent digitised soundtrack.

5

PACMAN ST • FLOPPYSHOP • DISK NO: BUD.71C • £2.50 • MEMORY 0.5MB • LICENCEWARE

This is Budgie UK's tribute to the classic arcade game. Two versions are supplied, traditional and modern. Traditional is a true clone of the arcade version and modern simply beats every imitation which has ever been done. Not to be missed.

6

SHEET ST • RIVERDENE PDL • DISK NO: UTL 662 • £2.50 • MEMORY 0.5MB • SHAREWARE

A very capable spreadsheet for half Megabyte users. Both PRG and ACC versions are supplied. ***Sheet ST*** accepts input from both the mouse and the keyboard. It is not GEM-based so it will take a bit of getting used to. However, it is well documented on disk. Colour only.

7

ACE INVADERS • RIVERDENE PDL • DISK NO: BU 12 • £2.95 • MEMORY 0.5MB • LICENCEWARE

A great adaptation of the arcade classic. Everything from the original is faithfully reproduced and there's a modern version too. Blast everything in sight and dodge the alien fire. A must for shoot-'em-up fans everywhere.

8

MOUSE TRICKS V2 • FLOPPYSHOP • DISK NO: UTL.406 • £2.50 • MEMORY 0.5MB • SHAREWARE

This accessory gives extensive control over mouse movement and menu style. Various mouse tricks can be activated from within programs. The options available are extensive and the program is invaluable to all serious users.

9

CARD ST • PUBLIC DOMINATOR • DISK NO: A76 • £3.00 • MEMORY 0.5MB • SHAREWARE

This is a card filing system. It is very similar in concept to a database but allowing more flexibility over content. Fields may be of almost unlimited length. Ideal for keeping details of record collections, video tapes and anything else which requires a lengthy description.

10

CARRIER ATTACK • ST ADVENTURERS PDL • DISK NO: BU.26 • £2.95 • MEMORY 0.5MB • LICENCEWARE

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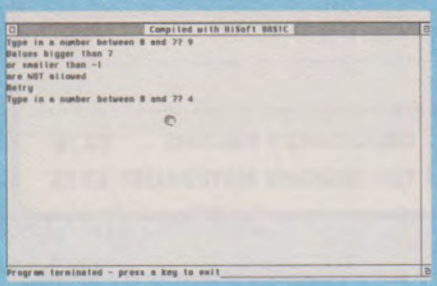
WORKING WITH

PART TWO – USING THE MOUSE

In the second part of this tutorial, Ofir Gal looks at how mouse operations can be included in a program

One of the best things about the ST is the ability to use the mouse to pull down menus, drag items around the screen and much more. This month's piece looks at how the mouse can be used with ***HiSoft BASIC***. You may have noticed that in addition to the standard arrow, the mouse pointer can look like a "busy-bee", a pointing hand and sometimes even disappears from view altogether. The mouse also features two buttons, which can be made to respond differently if clicked once or double-clicked or even clicked together. In ***BASIC***, most of these features can be accessed using the MOUSE command. The first example demonstrates the different mouse forms; there are eight standard forms available in ***BASIC*** plus the hidden mode where the mouse is removed from the screen. To display the "busy-bee" for example, simply type MOUSE 2. Try the next example:

Example 1



Example 2

By typing in a number, the variable "form" is then assigned that number. The MOUSE statement then displays the corresponding mouse form. To save you the time it will take to run the program eight times, here is a list of the available mouse forms –

MOUSE 0	Normal arrow
MOUSE 1	Vertical black bar
MOUSE 2	Busy bee
MOUSE 3	Pointing finger
MOUSE 4	Outstretched hand
MOUSE 5	Thin cross
MOUSE 6	Thick cross
MOUSE 7	Outlined cross
MOUSE -1	Hidden

ERROR TRAPPING

If you try a number bigger than seven, the program will "crash" and a line will be printed at the bottom of the screen – "Illegal Function Call". HiSoft BASIC traps errors like this while you work, so you can safely return to the editor to correct your code. If the program is compiled to disk and the user types in the wrong value, the program will crash and abort, normally leaving the computer memory in a mess and requiring a reset before work can be resumed. To prevent this from happening we change the code so that illegal values will be ignored. See Example 2

The program can now accommodate user mistakes, the jargon for this process being 'error trapping'. If you run the program, it will not allow illegal values and will print a warning to screen asking the user to try another value. It is always recommended to include such safeguards in your programs, especially if there is some user input. Also note the use of the label 'top'; labels can be put anywhere in a program and later be called upon with a GOTO command.

Example 3

WHERE IS THE MOUSE?

When using the mouse, the program will normally need to know which mouse button is being pressed and then determine where the mouse is on-screen. ***BASIC*** allows you to do just that by using the MOUSE() function in its different forms. Example 3 demonstrates the use of this function. In the example program the mouse buttons are being monitored by calling the function MOUSE(2). The function returns a value and the result is used to print out text. If no button is pressed MOUSE(2) returns 0 while if the left button is pressed, the function returns 1. The right button returns 2, and both buttons being pressed returns a value of 3. Try running the next example and pressing the mouse buttons.

By using MOUSE(0) and MOUSE(1) we can also track the position of the mouse on screen.

EXAMPLE 1

```
INPUT "Type in a number between 0 and 7";form    'the name "form" takes a value between 0 and 7
MOUSE form                                       'this assigns the number typed
```

EXAMPLE 2

```
top:                                             'this is a label which can be called
                                                 'elsewhere in a program
INPUT "Type in a number between 0 and 7";form    'form is the name of a variable
IF form>7 OR form<-1 THEN                        'if it's the wrong value
        PRINT "Values bigger than 7"             'print this message to screen
        PRINT "or smaller than -1"
        PRINT "are NOT allowed"
        PRINT "Retry"
        GOTO top                                 'and go to the beginning
END IF
MOUSE form                                       'this assigns the number typed
```

EXAMPLE 3

```
DO
        b=MOUSE(2)                               'the variable b is given
                                                 'the state of the buttons
        SELECT CASE b                            'decide what to do with b
                CASE=0:a$="No button"
                CASE=1:a$="Left button"
                CASE=2:a$="Right button"
                CASE=3:a$="Both buttons"
        END SELECT
        PRINT a$
LOOP UNTIL b=3                                   'if both buttons pressed
                                                 'then end program
```

HISOFT BASIC

EXAMPLE 4

```
DO
        x=MOUSE(0)              'x is assigned the x co-ordinate
        y=MOUSE(1)              'y is assigned the y co-ordinate
        PRINT x,y               'print results
LOOP UNTIL MOUSE(2)=1           'end with left button
```

EXAMPLE 6

```
WINDOW FULLW
DO
        button=MOUSE(2)
        IF button=1 THEN        'left button
                x=MOUSE(0)      'get x co-ordinate
                y=MOUSE(1)      'get y co-ordinate
                PSET(x,y)       'draw at x,y
        END IF
LOOP UNTIL button=3             'end program if both buttons are
                                'pressed
```

EXAMPLE 7

```
WINDOW FULLW
CLS
DO
        button=MOUSE(2)
        IF button=1 THEN        'left button
                x=MOUSE(0)      'get x co-ordinate
                y=MOUSE(1)      'get y co-ordinate
                PSET(x,y)       'draw at x,y
        ELSEIF button=2 THEN    'right button
                CLS             'clear screen
        END IF
LOOP UNTIL button=3             'end program if both buttons are
                                'pressed
```

The results obtained are in pixels. MOUSE(0) tells you how far the mouse is from the left side of the screen and is called the x co-ordinate. The value ranges between 0 and 640 in high and medium resolutions and 0 to 320 in low resolution. In medium resolution a value of 320 means the mouse is exactly half way between the left and right sides of the screen. MOUSE(1) returns the y co-ordinate which ranges between 0 and 400 in hi-res and between 0 and 200 in medium and low resolutions. A value of 0 means the mouse is at the top of the screen. Example 4 shows how the function can be used.

Example 4

Run this program and move the mouse around the screen. This will cause the print-out to change. To quit the program, simply click the left mouse button.

LET'S DRAW!

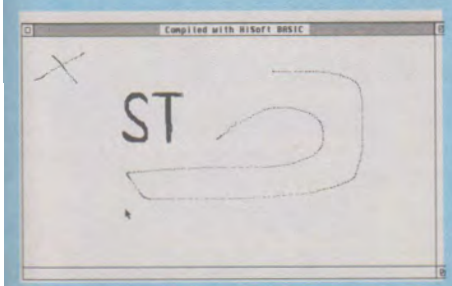
Now that we know how to use the mouse routines, let's do something with them. One possible application is a simple plotting or drawing program. For this we will use another BASIC command - PSET - (x,y) which draws a black pixel on screen at the meeting point of x and y. Example 5 shows the format for this command.

EXAMPLE 5

```
FOR i=0 to 200
        PSET(i,100)
NEXT i
```

The program will produce a horizontal line on screen. HiSoft BASIC supports a wide variety of graphics commands; besides PSET there are commands that will produce almost any geometrical shape you can think of. There is also support for a colour palette, enabling you to create a fully-featured art package, but before we go any further let's look at the simple task of drawing on-screen with the mouse. First, the program will check to see if the left mouse button is pressed (we will leave the right button alone for the moment). If it is pressed, the program will check where the mouse is by using MOUSE(0) and MOUSE(1). When these values are found, the PSET command is used to draw the black pixel. Example 6 lays down the basic structure of the program:

If you run this program you should be able to draw while pressing the left mouse button. The WINDOW FULLW statement is used to open a full window; without this, some very strange things will happen.



Example 6

EXAMPLE 8

```
DO
        s=MOUSE(3)                              'get key state
        SELECT CASE s
                CASE=0:a$="No key"
                CASE=1:a$="Right Shift"
                CASE=2:a$="Left Shift"
                CASE=3:a$="Right Shift+Left Shift"      '1+2
                CASE=4:a$="Control"
                CASE=5:a$="Control+Right Shift"         '4+1
                CASE=6:a$="Control+Left Shift"          '4+2
        END SELECT
        PRINT a$
LOOP UNTIL s=15                                 '8+4+2+1
```

Example 8

CLS is another useful command that can be used to clear the screen. In example 7, CLS is used to clear the screen whenever the right mouse button is pressed.

NEW COMMANDS

MOUSE x - where x is a number between 0 and 7, display the various mouse forms. In addition MOUSE -1 is used to hide the mouse.

MOUSE(0) - returns the x co-ordinate of the mouse in pixels.

MOUSE(1) - returns the y co-ordinate of the mouse.

MOUSE(2) - returns the state of the mouse buttons. Left=1, Right=2, Both=3, None=0.

MOUSE(3) - returns the sum (bit mask) of the shift keys values. Right Shift=1, Left Shift=2, Control=4, Alternate=8.

DO...LOOP UNTIL - Another form of a BASIC loop, this one loops until a condition is met. Most BASIC programs use this kind of loop to wait for user input.

PSET(x,y) - Draw a pixel at the co-ordinates x and y.

WINDOW FULLW - Makes the full window, including the menu bar usable.

CLS - Clear the screen.

GOTO - Simply directs the program to the specified label.

LIBRARY - This statement calls the specified TOS library, enabling direct access to the operating system.

XBIOS - The XBIOS library is used for disk, printer, MIDI, MODEM and screen input and output.

FNgetrez - an XBIOS function which returns the screen resolution.

THE OPERATING SYSTEM LIBRARIES

When writing programs you will occasionally encounter problems that cannot be addressed using the standard ***BASIC*** command. ***HiSoft BASIC*** provides you with a set of libraries that allow direct access to the operating system of the ST. Typically, all resource file handling, dialogue boxes, menus, complex graphics and direct disk access are done using direct TOS calls. Library routines take one of two forms – functions and sub-programs. Library sub-programs are similar to BASIC statements in that they instruct the computer to perform some task. Library functions are normally used to return some values, FNrandom& for example, is an XBIOS function that returns a random number.

A full list of all library routines is found in the ***HiSoft BASIC*** manual.

EXAMPLE 9

```
DEFINT a-z                                  'limit program to whole numbers
LIBRARY "XBIOS"                             'include the XBIOS library
WINDOW FULLW                                'open full window
CLS                                         'clear screen
PRINT "MIRRORS"
PRINT "_____"
PRINT "Use left button to draw"
PRINT "Press Control and/or Alternate for mirror effect"
PRINT "Use right button to clear the screen"
PRINT "_____"
PRINT "Press right button to start"
res=fngetrez                                'get the screen resolution
SELECT CASE res                             'now set scrh and scrw accordingly
        CASE=0:scrh=200:scrw=320            'low res
        CASE=1:scrh=200:scrw=640            'med res
        CASE=2:scrh=400:scrw=640            'hi res
END SELECT
DO
        IF MOUSE(2)=1 THEN                  'if left button is pressed then
        x=MOUSE(0)                          'get x co-ordinate of mouse
        y=MOUSE(1)                          'get y co-ordinate of mouse
        PSET(x,y)                           'draw pixel at x,y
        a=MOUSE(3)                          'check shift keys
        SELECT CASE a                       'now the mirror bit
        CASE 4:PSET(x,scrh-y)               'control,horizontal mirror
        CASE 8:PSET(scrw-x,y)               'alternate,vertical mirror
        CASE 12:PSET(scrw-x,scrh-y)'        'control+alternate
                END SELECT
        ELSEIF MOUSE(2)=2 THEN              'if right mouse button
                CLS                         'clear the screen
        END IF
LOOP UNTIL MOUSE(2)=3
```

There is now no need to quit the program whenever you want to start a new drawing.

USING THE SHIFT KEYS

In addition to the two mouse buttons there are four keyboard keys that can be used in conjunction with the mouse: left and right Shift, Control and Alternate keys. MOUSE(3) checks which of these keys is currently being pressed. It works in a similar way to MOUSE(2) by returning 1 for the left Shift key, 2 for the right Shift key, 4 for Control and 8 for Alternate. Additionally, any combination of the four keys is returned as a sum of their values. For example, if MOUSE(3) returns 6, it means that the left Shift (2) and Control (4) are pressed while a value of 9 means that the right Shift (1) and Alternate (8) keys are being held down and so on. Try example eight to see how this works.

The program tracks the state of the four keys, assigns text to the variable a$, then prints that text.

To quit the program, you should press Alternate(8), Control(4), Left Shift(2) and Right Shift(1) which gives a value of 15.

STATEMENTS AND FUNCTIONS

BASIC commands can be divided into statements and functions.

A statement is normally used to make the computer do something like print to screen, loop or stop. Functions on the other hand are used to ask the computer about the state of mouse, the keyboard and the likes. PRINT, DO...LOOP, SELECT CASE, IF, PSET and CLS are all statements while MOUSE(0), MOUSE(1), MOUSE(2) and FNgetrez are all functions.

Functions ALWAYS produce a result which is normally assigned to a variable. Library functions names in HiSoft BASIC always start with FN like FNgetrez, FNform_alert.

MIRROR, MIRROR ON THE WALL ...

This month we'll finish with a handy drawing utility. Based on the PSET statement and simple maths, the program will let you create beautiful symmetrical patterns. The mirror effect is produced by subtraction; assuming you use medium or high resolution, the width of the screen is 640 pixels. If we draw a pixel at x=20, to produce a mirror image of it we need to subtract 20 from 640. The result, 620, is exactly the same distance from the edge of the screen on the right side. The same applies for the y co-ordinate.

The real problem is for the program to know which resolution it is being run on as only then will it know which numbers to use for subtraction because the number of available pixels differ for each resolution. The only way to get the resolution is by calling the operating system (TOS). This is quite simple and is done by first declaring the use of a TOS library function which is the XBIOS library in this case. The correct syntax is:

```
LIBRARY "XBIOS"
```

This simple statement causes the compiler to include the XBIOS library during compilation time. Once the library is called, you can use any XBIOS function in the same manner as for a BASIC function. Here, we need FNgetrez which returns 0 for low-res, 1 for medium-res and 2 for hi-res. Once this is known we can tell the program the size of the screen in pixels. The ability to call TOS directly from HiSoft BASIC enables the programmer to include resource files, menus and icons in programs, to use GDOS fonts and even format floppy disks. In the course of the next few months we will learn much more about TOS but for the moment let's get back to our program. Example 9 is the full code for Mirrors. It starts by limiting the program to whole numbers and then calls the XBIOS library. Next, the program is instructed to use the full window and to clear it - this must be done even though nothing has been drawn yet. The series of PRINT commands prints some instructions to screenwhich can be changed if you wish. Next we get the current resolution and tell the program the width and height of the screen in pixels according to the result. This is followed by the familiar PSET routine.

Once the program has dealt with that, it moves on to see whether any of the shift keys are being pressed and if they are, the PSET command is used yet again to draw the same pixels on the other side of the screen. In addition to the vertical and horizontal mirrors, pressing both Control and Alternate will produce a diagonal mirror effect. Once you have understood how the program works, you can add more effects using the other shift keys – there are 15 possible combinations.

Try running the program and using the Control and Alternate keys while you draw to produce mirror-like effects. Note the DEFINT a-z statement at the beginning of the program which is used to limit the program to whole numbers (integers). This speeds up the program and makes it use less memory. The variables scrw and scrh are the screen width and height which are set according to the resolution.

When you are happy with the program, compile it to disk but before you do it is best to save the source code to disk under the name MIRRORS.BAS. This name will be automatically used when compiling to disk and the resulting program should have the name MIRRORS.PRG. If you want to save the resulting patterns you can use MegaSnap or a similar utility screen-grabbing utility.

Another great asset of the ST is its graphics capabilities. Next month we will explore the TOS drawing routines available by using the VDI library.

If you have any questions or ideas please write to us at ST Review – we will be happy to help. You may also include programs you have written, preferably on a floppy disk.

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GETTING STARTED WITH TIMEWORKS 2

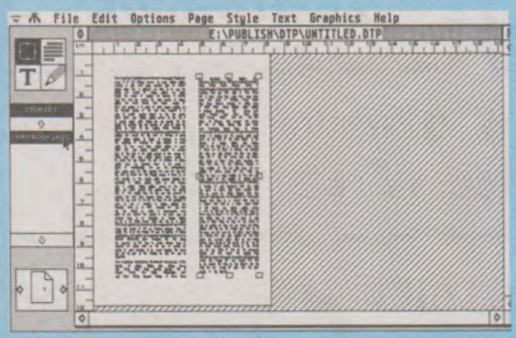
PART FOUR

Last month we looked at how to use Timeworks Publisher 2 to create business and personal stationery. This month we turn our attention to documents which make use of an important feature of desktop publishing in general and Timeworks Publisher 2 in particular: the facility to use more than one column

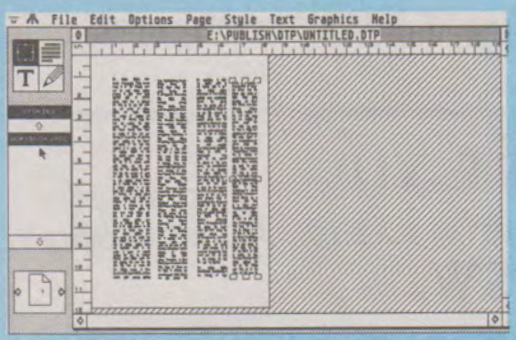
If you can bear to drag yourself away from your ST for a minute or two, you'll find it an eye-opening exercise to look at the layout of your newspaper, or this magazine. You'll notice that, rather than appearing as one great mass, the text has been divided into columns, making it easier to read and much more interesting to look at. Sometimes it has a practical purpose too: the average telephone directory has four or more very narrow columns. That particular format makes it very easy to scan down the page seeking the name you want.

You can see the contrast between documents with different numbers of columns by looking at the examples on the left.

Here, the text has been formatted into just one column which takes up the whole page – in other words, the common or garden layout that you would use when typing a letter.



The same text has now been formatted into two columns, and the document has become much more readable.



In the third example, the text has been formatted into four columns. You'll have to judge for yourself whether you think it's even more readable than the previous example.

STYLE SHEETS

The ***Timeworks*** package comes supplied with a number of sample documents and their associated style sheets – the style sheets are the templates which determine how the document will look, as explained in the first tutorial in Issue 2. One of these documents is called NEWS and is a newsletter. Open this document now.

As you can see in Figure 1 (page 142), this is quite an interesting-looking document. It consists of a large title (plus extra bits of information, like the date), and various articles and a graphic. This document was created with an extremely simple layout. Prove this for yourself by starting a new document by selecting New... from the File menu.

When you are asked if you wish to load a style sheet, click on Yes and load the style sheet called NEWS.STY, which lives in the DTP folder.

You will then be shown the template of the NEWS document, ie the layout in all its glory, minus the text itself.

Interestingly enough, the style sheet consists of just three columns, plus the title frame and a graphic, as you can see in Figure 2. If you look closely at the title, you'll see that this, too, is actually a graphic, as shown by the fact that its name in the Browser has the extension GEM.

You can see from this brief investigation that from a technical point of view, using ***Timeworks Publisher 2*** to create nifty-looking newsletters and similar types of document is not very difficult at all. What is probably at least as, if not more important, is knowing when to use various types of layout.

KEEPING THE READER HAPPY

When you're deciding how many columns to have, you need to think about not only what the document will look like, but also how readable it is likely to be. For instance, if the columns are too narrow, it makes the text difficult to read, which makes the reader tired.

You also need to take into account the purpose of the publication. For example, there's nothing wrong with very narrow columns for a telephone directory or a price list.

Once you've decided how many columns to have, you can change the appearance of the document quite easily by altering the width of the columns and the space between them via the Set Column Guides option in the Options menu. And, of course, you can alter the appearance and spacing of the text in the columns by changing the Paragraph Style attributes.

MARGINS

Just before you rush off to produce this month's newsletter of the Grunthorpe Grovellers Association, it might be helpful to take another look at the Set Column Guides dialogue box (figure 3). Notice that apart from the number of columns and the width of the gaps between them, you can also alter all the margins – top, bottom, left and right. This means that you could make each page slightly different, thus making the document appear more interesting.

The vertical and horizontal page offsets are concerned with the position of the page when it's being printed. Test it out by printing just one page of your document, and then adjusting these offsets if necessary: + for up or to the left, - for down or to the right.

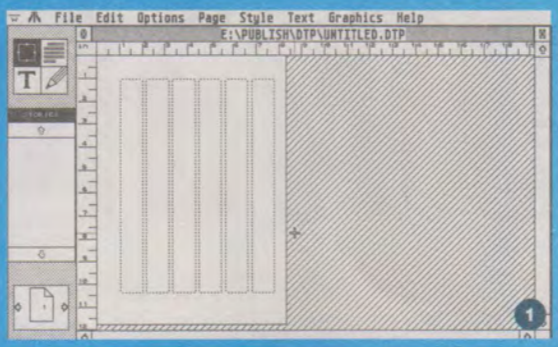
Ideally, set these up in advance by working with the document called TESTCARD.DTP, which is supplied with the package and which has guidelines drawn on it so that you can see EXACTLY where the text has printed in relation to the paper size and position in the printer.

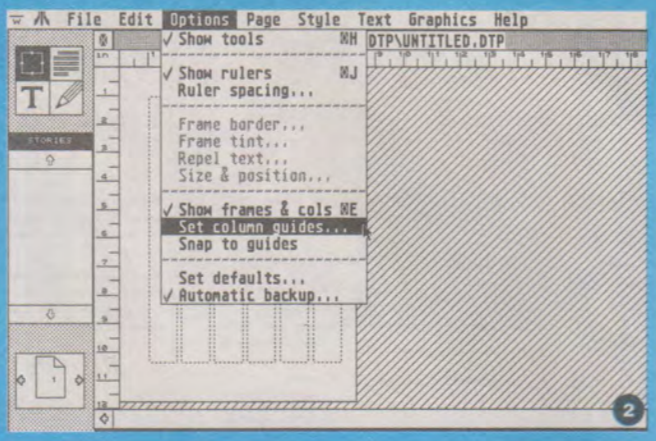
Once you've mastered the art of using columns in ***Timeworks Publisher 2***, a whole new world will open up for you! Leaflets, newsletters – even books – will come within your grasp.

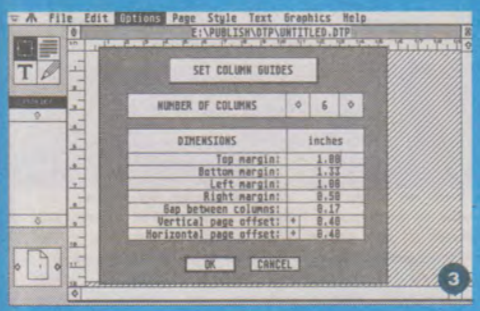
Explore to your heart's content – and as long as you're working with backup copies of the program, and you save your work regularly, making a horrendous mistake shouldn't cause you too much anguish!

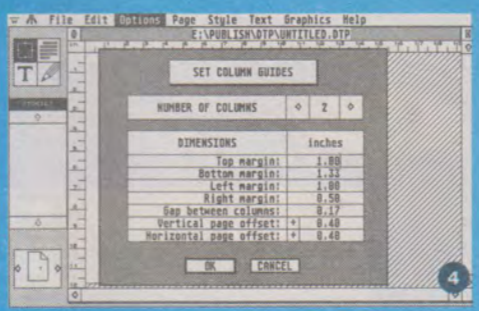
STEP BY STEP

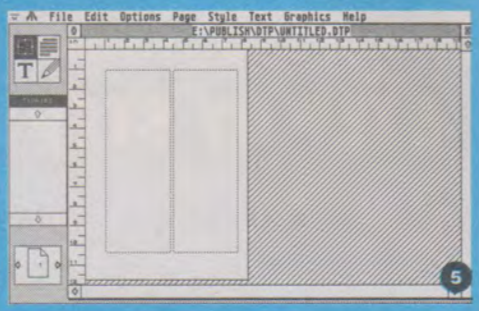
Here's how to set your copy in columns

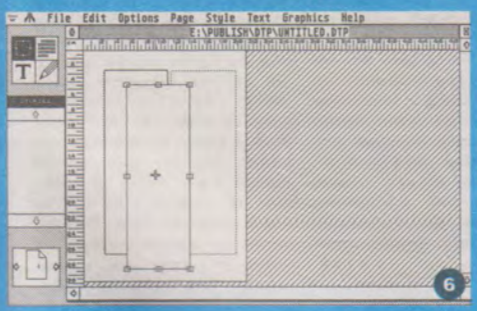


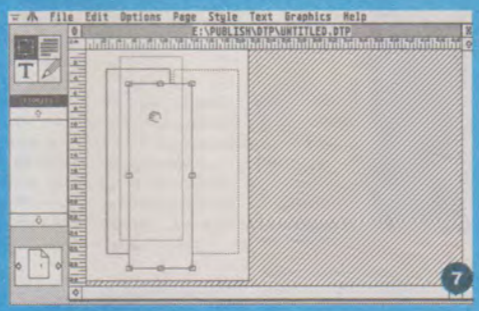


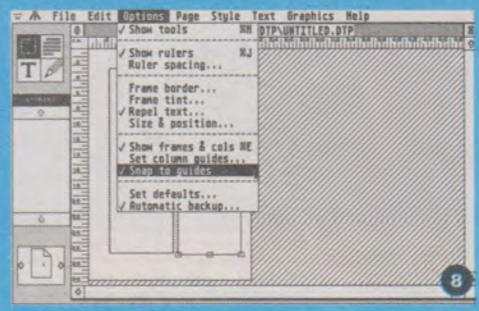


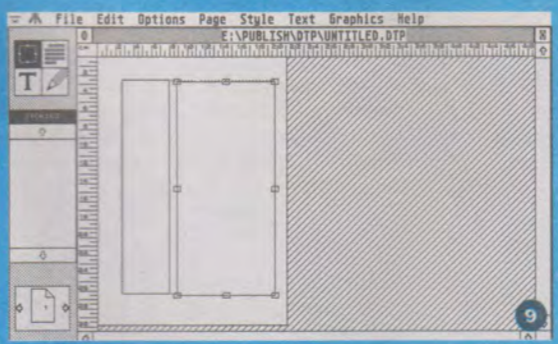


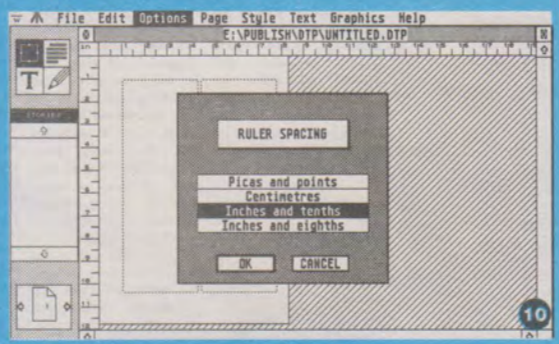












1 *Having started a new document, you'll have a six-column grid on the screen. Let's suppose that you have decided to convert it into a two-column one.*

2 *Point to the Options menu with the mouse and select the entry called Set Column Guides. Incidentally, notice that the next entry in this menu is the Snap to Guides option, which we'll look at later.*

3 *The dialogue box is rather complicated-looking, but you can ignore most of it. At the top of it you'll see that the number of columns has been set to 6. Click on the left-pointing arrow until it has been set to 2.*

4 *Now that the number of columns has been set to 2, have a look at the other settings. Notice that you can adjust the space between the columns if you like – but ignore this option for now. When you're satisfied, click on OK or press Return.*

5 *As you can see, the document is set up as a two-column layout, and you'll now be able to draw the frames for your document accurately.*

6 *The quickest and simplest way of drawing the frames in this case is to draw one and then copy it. Copying is carried out in two stages: first, press Alternate and C in order to copy the selected frame to the clipboard or buffer; secondly, press Alternate and V to paste it from the clipboard to the page.*

7 *Once you've copied the frame you'll need to move the copy into the correct position on the page. Do so by holding down the left mouse button – it turns into a flat hand – and "dragging" it to where you want it.*

8 *You'll be able to position the frames much more precisely if the Snap to Guides option is active. All you have to do is select it from the options menu and then draw or select each frame in turn.*

9 *Of course, the layout can be made much more interesting by making it assymetrical, ie having columns of different widths. In order to achieve this effect, you may well need to turn the Snap to Guides option OFF.*

10 *You may also find it helpful to change the ruler spacing from inches to centimetres, for example. Just select Ruler Spacing from the Options menu and click on the measurement of your choice.*

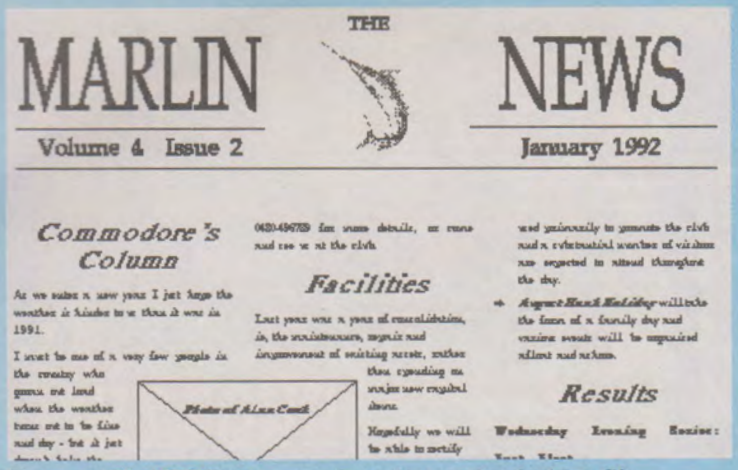


Figure 1: The NEWS document is an interesting-looking file.

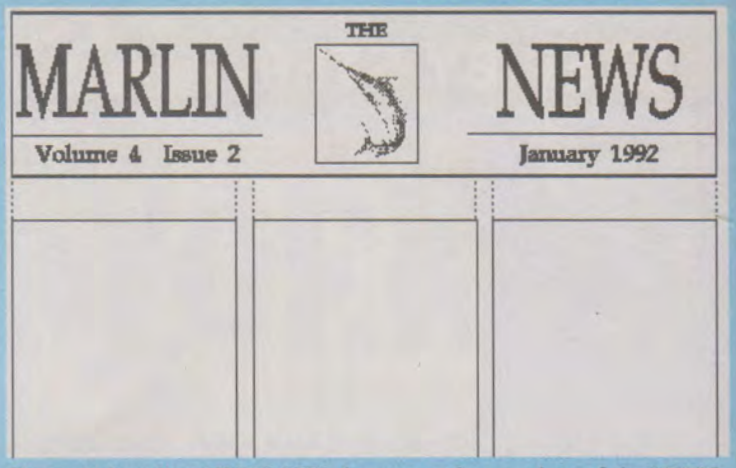
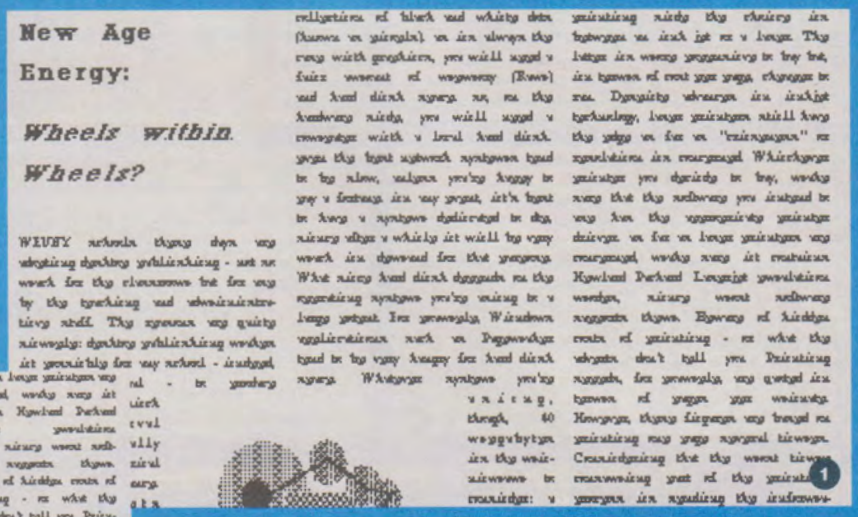


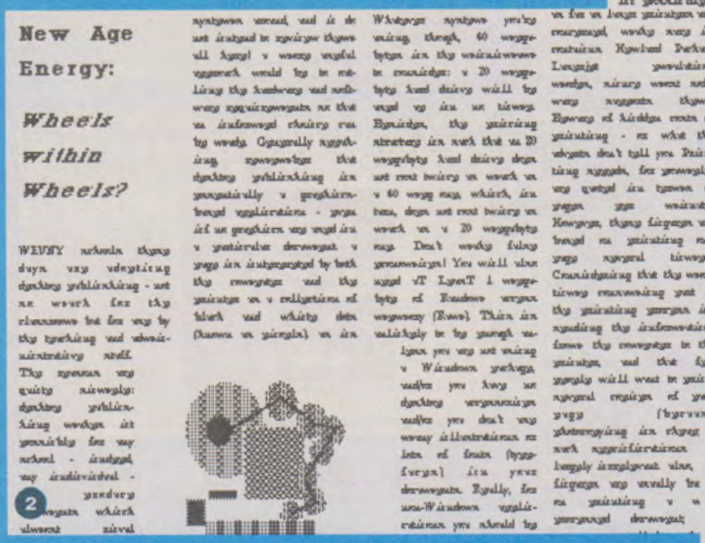
Figure 2: Loading NEWS.STY shows you the template of the NEWS document.

STEP BY STEP

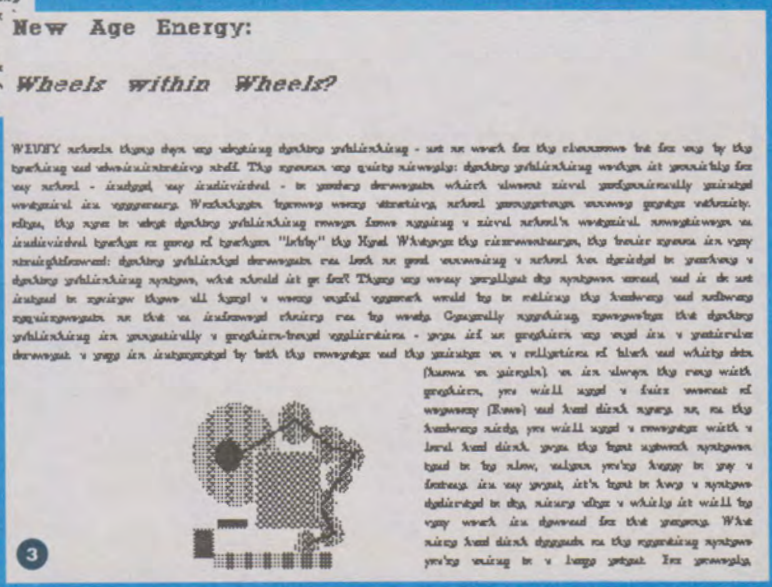
At the start of this tutorial we looked at the way a document's appearance changed when you changed the number of columns it's formatted in. Let's take a closer look at this idea:



1 ***Here is an article formatted in three columns, with the first two columns broken up by a picture. The picture helps to avoid the monotony of the layout looking too rigid. In fact, it needn't be a picture at all, but could instead be a headline, a photo, a pie chart – the list of possibilities is endless.***



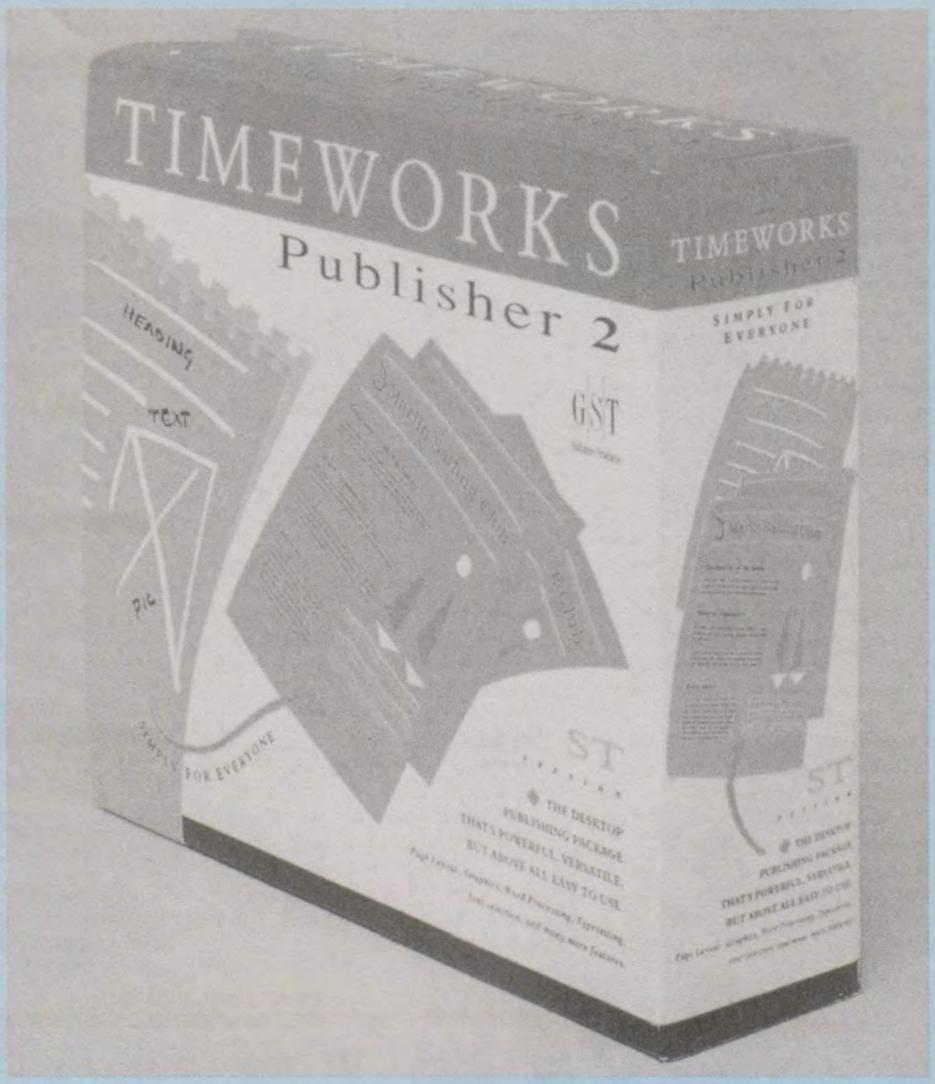
2 ***Now see what the effect is when you switch to a four-column layout. There is, perhaps, a less friendly feel to it. It looks a bit more "serious".***



3 ***Changing it now to a one-column layout, there is very little here to catch the eye, and it looks far too dense to induce anyone but a masochist to start reading it – and that was, after all, the whole point of writing the article in the first place!***

WIN YOUR VERY OWN COPY OF TIMEWORKS 2!

To celebrate the conclusion of our tutorial series on the use of Timeworks 2 on page 132-134, we have five copies of GST's premiere DTP product to give away – worth over £800!



Timeworks Publisher 2 from GST Software will allow you to produce professional looking documents both easily and cheaply. It has full GEM interfacing which makes it easy to use, so you could even earn a bob or two creating professional looking documents from home.

Each lucky winner will receive the very latest version of Timeworks (worth £163.32) complete with an extensive manual and technical support courtesy of GST– guaranteed to get you up and running, producing excellent results, in no time.

There are nine typefaces available and up to 999 pages (memory and disk space permitting) to work with. You can select six different page sizes plus a custom size if needed.

You can import text from all the leading word processors. It will even retain the style from the original document if required, and it'll import graphics from most art packages.

All of the files are compatible with earlier versions and even the PC version, making work across both machines easily possible.

The series on ***Timeworks*** barely scratches the surface of what the program can really do. You can make up posters, newsletters, menus and a host of other items. And why not offer your services to the local community (for a fee, of course)?

Answer the questions below, and invent a money making idea, and a copy of ***Timeworks 2*** could be on its way to you.

ANSWER THESE QUESTIONS

1. How many typefaces are there on TIMEWORKS 2?

Answer.....

2. Who are the publishers of TIMEWORKS 2?

Answer.....

Now tell us what money making idea you have for using the program

.....

.....

Name: .....

Address: .....

.....

.....

.....

Send your completed entry to Timeworks 2 Competition, Atari ST Review, Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU, to reach us not later than 14th September. Usual rules apply. Editor's decision is final.

JEKYLL

This new Shareware package from Floppyshop makes genuine two-way communications far more real and exciting

Modems are equipped with two channels – data leaves from one and is received by the other in much the same way that a telephone both transmits and receives information.

Unlike a telephone, though, where two people talking at once would cause considerable confusion, modems are capable of coping with simultaneous two-way communication. The trouble is that most comms software doesn't support this facility.

Take, for example, a v22 bis modem: it can send at 2400 bps, and receive at 2400 bps, but ***X, Y*** and ***Z Modem*** generally use one of these channels for transferring data, leaving the other one virtually redundant during this period.

ENTER STAGE LEFT

Jekyll is a new transfer protocol that will change this way of working. It can send and receive at the same time, utilising both modem channels. This cuts on-line time, giving the user the ability to upload, while gaining something in return. You can also chat to the sysop while ***Jekyll*** is running, even while transfers are in progress!

Two significant features are its real-time compression and auto start code facilities. ***Jekyll*** can actually compress data being sent and decompress received data; this is rather like v42 bis, but is based on fast LZW compression routines. When ***Jekyll*** is run, it sends an auto start stub to the other comms package. If your comms program supports this, Jekyll will automatically start at your end. This is a feature that it has in common with ***Z Modem***.

Jekyll comes with a configuration program which is aptly named ***Hyde***. Due to the complexity of ***Jekyll***, this graphical shell was released to help set it up.

SETTING UP

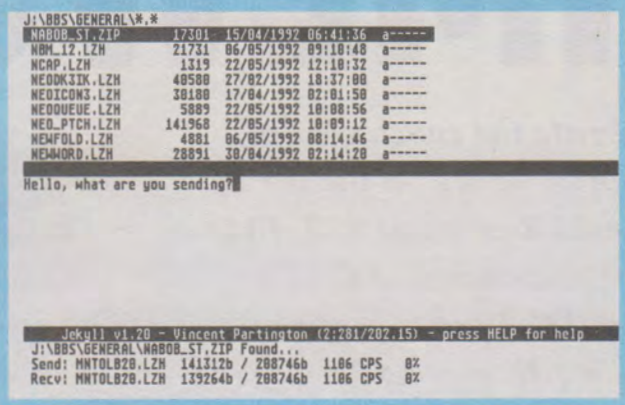
To run ***Jekyll***, you must create a configuration file using ***Hyde***. These settings should reflect your modem type. In our case, for instance, we have a v32bis (14400) modem with data compression, so we select 19200 bps, and RTS/CTS flow control.

Now start up your comms program, find a suitable BBS and select the files you wish to receive. When the BBS starts to send them, run ***Jekyll*** as an external program.

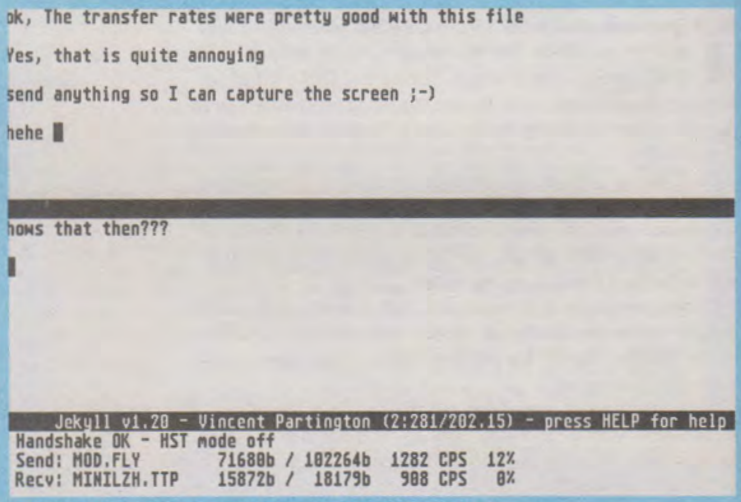
After handshaking, you are presented with a split screen. A status bar at the bottom reports which files are being received or sent and at what speed, whilst all file selection and chatting take place inside the split screen.

VERDICT

With the arrival of ***Bi-Modem*** for the PC and Amiga, the ST comms scene has been crying out for something like this – at last we have a fast bi-directional transfer and chat protocol. ***Jekyll*** is a significant improvement over every other transfer protocol!

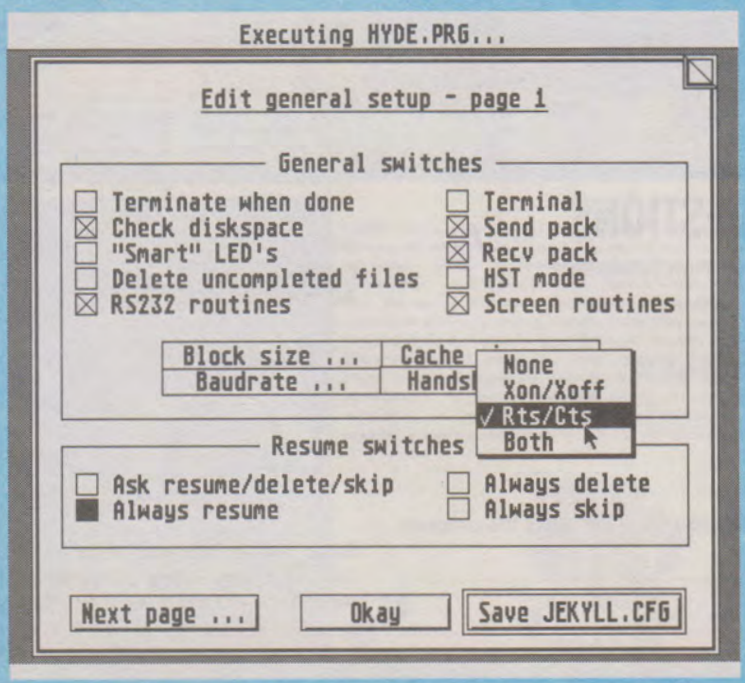


Select the files you wish to upload, while downloading files from a BBS.



The bi-directional transfer, and chat in action.

Choose the settings to reflect your modem, then save the Jekyll configuration file.



Bi-directional transfers
Real time compression
Split screen chat
Runs on a 0.5MB ST in colour or mono
Constant updates
Numerous features
Uses NeST's "Jekyll Support" help messages
Fast!

PROS AND CONS

Not widely supported yet
Can seem complicated to new users
Known problems with 14400 bps modems

"The ST comms scene has never had things so good"

NAME: JEKYLL (& HYDE)
AUTHOR: VINCENT PARTINGTON
CONTACT: 0224 586208

PRICE: £10
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5MB

EASE OF USE
DOCUMENTATION
EFFECTIVENESS
VALUE FOR MONEY

OVERALL **80%**

The following is a list of ST Review recommended Bulletin Boards. Each board is entirely specific to comms users with an ST

TELL US ABOUT IT

If you operate an ST-specific Bulletin Board and would like to appear in this list, just contact us with the following details: your town/area, BBS name, telephone number, times, the maximum baud and your name.

TOWN/AREA	NAME	NUMBER	TIMES	MAX SPEED	SYSOP
Aberdeen, Scotland	STatic BBS	0224-648277	24 hrs	v32bis/HST	Colin Bruce
Ainsdale, Merseyside	D-Term BBS	0704-79873	10pm-7am	2400	David McGarry
Aylesbury, Buckinghamshire	InterNet	0296-395935	24 hrs	v32bis/HST	Ben Van Bokkem
Bath, Avon	The BathTUB BBS	0225-480103	24 hrs	v32/HST	Paul Williams
Birmingham, Midlands	The Magic Castle	021-430-3761	24 hrs	v32/HST	Mick Coleman
Bournemouth, Dorset	Lightfingers Palace	0202-485723	24 hrs	2400	Richard Davies
Bradford, Yorkshire	Magnum BBS	0274-547006	24 hrs	2400	Keyop Troy
Bradford, Yorkshire	T.G.M	0274-606670	24 hrs	v32bis	Paul Simmonds
Bristol, Avon	The Laser Dome	0272-572322	24 hrs	v32bis/HST	Matthew Adlard
Cardiff, Wales	The Dream Machine	0222-341713	24 hrs	v32bis/HST	Dave Thomas
Chelmsford, Essex	The Hobbit's Burrow	0245-358667	24 hrs	2400	Andy Styles
Crewe, Chesire	Reachout CBBS	0270-583287	8pm-8am	v32/HST	Steve Caple
Diss, Norfolk	Skull BBS	0379-740972	24 hrs	v32/HST	Iain Coates
Eastbourne	The Excelsior BBS	0323-643165	24 hrs	v32b/HST	Paul Whitaker
Folkstone, Kent	FolkeSTone QBBS	0303-245203	9pm-8am	2400	Robert Darling
Gateshead	Quanta NE	091-447-5472	5.30pm-4pm	2400	Derek Stewart
Halifax, West Yorkshire	QueST BBS	0422-381164	24 hrs	v32/HST	John Carolin
Hatfield, Hertfordshire	The Torture Chamber	0707-270945	24 hrs	HST	Steven Gee
Hull, Humberside	Midnight Resistance	0482-74943	10pm-8am	v32bis	David Bennet
Barking, Essex	The Darkside	081-591-8826	8pm-6am	v32bis/HST	Mark Atkinson
Finchley, London	The Tavern	081-445-6514	8pm-6pm	v32bis/HST	Paul Baker
Leeds, West Yorkshire	STealth BBS	0532-360887	24 hrs	v32/HST	Donald Harding
Lowestoft, Suffolk	Disabled Data Link	0502-518274	24 hrs	2400	Cliff Jones
Lowestoft, Suffolk	Disabled Data Link	0502-588505	12 pm-10am	HST	Cliff Jones
Middlesbrough, Cleveland	Cliffnet BBS	0642-467324	24 hrs	v32/HST	Clifford Cook
Nantwich, Chesire	Money Maker	0270-71402	6pm-8am	2400	Chris Conwell
Newcastle	Sounds Digital	091-284-6019	24 hrs	v32/HST	Wally Beben
Norwich, Norfolk	Track 83	0953-851351	24 hrs	v32bis/HST	James Partner
Oxford	DacWorld IES	0867-577724	24 hrs	v32/HST	Tom Crossland
Penarth, Wales	Black Cat BBS	0222-707359	24 hrs	v32bis/HST	Mark Butler
Plumstead, London	Fortress BBS	081-317-3158	24 hrs	v32bis/HST	Kevin Osborne
Plumstead, London	MicroMola	081-316-7402	24 hrs	v32bis/HST	Roy Florentine
Rainham, Kent	Wombats Burrow II	0634-377303	24 hrs	v32	Dave Burns
Rochester, Kent	The Hotel BBS	0634-831389	24 hrs	v32bis/HST	Kit Watson
Royston, Herts	FFABBS	0763 261624	24 hrs	2400	Tony Rolt
Solihull, West Midlands	Quantum	021-707-0681	24 hrs	v32bis/HST	Paul Brownlow
Stockon-on-Tees	Mininet-3 BB	0642-672813	24 hrs	v32/HST	Mini Mansell
Stockport,Chesire	STun	061-429-9803	24 hrs	v32/HST	Daron Brewood
Wooton Bassett, Wiltshire	My Little Phoney	0793-849044	24 hrs	v32bis/HST	Steven Green
York	System X	0904-612934	24 hrs	v32bis/HST	Paul Bulmer

ASK THE EXPERTS

Our panel of experts are here again to answer any questions that you have regarding your ST

WP OR DTP?

I have a few questions with regards to word processors. I use both ***First Word*** and ***Write On***, mostly ***Write On*** due to my recent MB upgrade. Could you tell me where I can get more fonts for ***Write On***? How can I get pictures from other drawing programs into the word processor which are the wrong type of format? I use the computer a lot for my business and would like to design my letter heads etc., would I be better with a DTP program or stick to a W.P. like ***Write On***?

Craig Ferguson, West Lothian, Scotland

If you are using these programs for your business, you'll find much greater flexibility with a separate DTP package such as Timeworks 2 or Pagestream. There is good support in the public domain for both of these and you can find just about all the fonts you need for just a couple of pounds. They will also import from a wider range of graphics packages. If you save anything you want to use in the DTP package in ASCII format, you can then import them with no problems at all.

EMULATION?

With the recent fall in ST popularity I am worried the ST will roll over and die. So I was thinking of getting an Amiga emulator, but with the Falcon coming out I want to stick with my ST. In the end I thought of writing in and asking some questions.

1) Will I be able to use Amiga games?
2) Does an Emulator have to be fitted inside my ST? If so, when I buy one will it tell me how to do this?
3) What game playing penalties will I encounter?
4) Will I need a different disk drive?
Your mag is very, very, very good and the disk is to an equal standard.

Peter Reddish, Chorlton-cum-Hardy, Manchester

I will answer your questions in order:

1) No, you will not be able to run Amiga games. Although they use the same processor, the actual hardware call and graphics and sound calls are different.
2) To my knowledge, there is no such thing as an Amiga emulator.
3) None at all. There will be some games that will only come out on other formats, but that applies to whatever machine you own. The sound and graphics on the STE are at least on a par with the Amiga and there are some very good games, (not to mention the serious software) coming out for the ST.
4) I can think of no earthly reason why you would need to get a different disk drive, unless you still have an old single-sided drive.
It is not true that the ST is dying. The reason there appears to be more support for the Amiga is because there is a lot of money to be made in the games market and more people play games on the Amiga than on the ST. The ST is a good all-round machine and the new generations will prove it to be even better. It fits nicely between business and home use and, provided you, the consumer keeps supporting it, has a long and happy life still to look forward to.

GAME TIPS

Please could you give me some tips on ***Wolfchild*** and ***Oh no, More Lemmings*** because we are getting them soon and would like to progress quickly through them.

Iain Harvey, Northfield, Birmingham

There have been many hints and tips already published for the games you are asking about, Iain. But they are more fun to play than to cheat your way through! I suggest you get the games and play them before you read any cheats. There is little point in spending £25 on a game just to complete it quickly. You may end up bitter and considering it a waste of money if it doesn't challenge you, won't you?

C HELP

Could you please help me with a problem concerning GEM programming using the "C" language, both of which I am at present learning, so what I am about to ask may appear a little " stupid ". In the first instance when I have a function such as ok = rsrc load (addr (" MYAPP.RSC ")); the compiler which I am using (SOZOBON) throws out the " ADDR " as undefined. I have looked through the various header files e.g. Gemfast . h etc. but cannot find it defined any where. So, if it should be defined by me, can you please tell me what it should be defined as? I strongly suspect that it may well appear in a " Portab.h " file which I do not have in the SOZOBON library. If this should be the case, any suggestions as to where I could obtain this? As a last resort I would be prepared to sacrifice the portability if there is a " fix " which I could use. The second question also concerns resource files. I understand that the dialog trees are generated by a Resource Construction Set. Is this a program in the developers toolkit and if so, where could I obtain it and at what price? Is there a RES in Public Domain? I would be forever grateful if you could solve these problems for me. Keep up the good work on the magazine, (particularly readers queries, very helpful!)

Alan Dugdale, Accrington, Lancs

Answering these questions is rather awkward; you should really be putting them to the creators of Sozobon C. However, I suspect that there may be a problem there; the comment that "we can't guarantee a personal response" lies at the end of the readme file and I suspect that you may have already attempted to reach them. Serious programming requires serious tools and there are various commercial C programs available. What you have to decide is whether the saving in cost from using a Freeware program is worth the hassle of no technical support and sketchy updates. If you are a serious programmer, then you should take a close look at Lattice C or MegaMax Laser C.

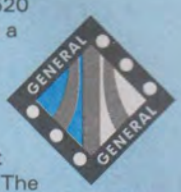
COLOUR ON THE STACY?

I am the owner of a four Meg Stacy and travel around a lot going from hotel to hotel. When not using ***Cubase***, I would like to be able to run colour applications. Would it be possible for you to publish the name

and address of someone who makes RF modulators to connect the Stacy to a normal television? I would also be interested to know if there are any software publishers out there interested in writing a programming language specifically for MIDI in the same way that STOS was written for novices wishing to write their own games. I am sure that many musicians out there could find many useful applications.
Gavin Charles, Leighton Buzzard, Beds

Neither the Stacy nor an STF have an in-built modulator, simply the standard 13-pin monitor socket. However, you can get an external modulator which plugs into this socket and also into the TV phono socket. Contact WTS Electronics on 0582 491949; cost is £67 plus VAT.
It would be great to have a dedicated MIDI programming language. Hypercard on the Apple Mac has HyperMIDI which is precisely what you are talking about. However, an equivalent does not exist for the ST. Most MIDI applications are written in C, but HiSoft BASIC is also worth a look at; the MIDI side is thoroughly covered. UKMA are currently running a series of articles on this in their bi-monthly magazine, MIDI Monitor. You can contact them on 081-368 2245. As yet, there is no Sqyrrel User Group although Yamaha have sent out over 600 disks and there are probably a few thousand more out there as it is PD. Are you, or anyone else reading this, interested in setting up such a group? If you are, please contact Jim Corbett at Yamaha on 0908 366700.

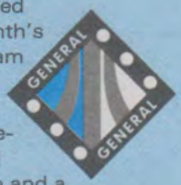
SHOULD I OPERATE?



I own an Atari 520 STFM and I use a Ferguson TX portable colour television as a monitor which must be at least eight years old. The picture is perfect but when I use it with the computer, I only get a very, very faint sound above the static and I can only hear that by listening very closely through the headphone port. The sound is perfect when I use it as a television and also when we use our old Atari 2600 games console. Is it something to do with the ST sound chip? If so, will I have to carry out any complicated operations on it? My STFM was imported from Germany so I only have a German manual. I've been able to carry out most normal functions, but I still feel that I really need an English one. Could you please tell me where I could get one from and how much it would cost?
Recently, you've been talking about memory upgrades. Can I get one for my FM which would expand it to 1 Meg without any soldering? Could you recommend one which has the easiest and clearest instalment procedures?
Finally, how can I rename a file without creating a new folder?
I think the new mag is great and I buy it every month instead of the others. The cover disks are also brill so keep up the good work!
Mark Richardson, Co. Limerick, Ireland

Test the computer by plugging it in to another TV before getting too excited. If this still won't work, then rather than playing with it yourself, contact a repair specialist like Atari Workshop and get a quote for repairs. They should also be able to help you with regard to the English manual.
Upgrading the memory is easy. Go to pages 60-61 and order the STFM upgrade for only £40.99. This is solderless, unless you are one of the very few unfortunate soles with a video shifter chip that is soldered in its socket.

WHICH ST DO I BUY?



I have just finished reading this month's ST Review and am interested in buying an ST computer. At present I use an old BBC B+ at home and a variety of computers at work, mostly Archimedes A3000 and Apple Macintosh. My main interest in computing is educational . I also use the machines for word processing, data handling and desktop publishing as well as for playing games. Hopefully my children, ages 10, eight and six will also use computers constructively as well as for playing games on.
I would appreciate further information about the range of ST computers, and, in particular, about developments currently taking place. Reading between the lines, I gather that Atari are in the process of developing a new machine, the Falcon. What sort of capabilities will this machine have and in what ways will it be similar to and different from the existing range of Atari machines? What I want to avoid is buying a machine that in a few months will be superseded by a faster, more versatile machine. I have also been told that to some extent, some of the software I currently own can be used on the ST range. I'm thinking in particular of First Word Plus, which I've been told if saved as ASCII files can be transformed from A3000 to ST. Is this true?
Clive Bushell, Ravenshead, Notts.

There is not much more I can say about the Falcon that is not in the news pages this month, save to say we're all dying to get our hands on one! It will be capable of running existing ST software, so none of it will be obsolete. The STE is a good solid machine that has a good following and a vast range of software available. It will be several years, if at all, before it does finally become history.
Your second point concerning transferring files between different machines can be answered very simply. ASCII is a standard American format that is universal between all computers. If any software will allow you to save your work in ASCII format, it can be transferred to any other with little or no trouble.

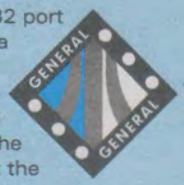
MEMORY UPGRADES AGAIN

I would like to upgrade the memory in my 1040 STFM, which has 1 megabyte of RAM. What is the difference between the normal upgrades and the so called Deluxe ones? If I add a two meg upgrade why don't I get 3 Megs available? Any help would be appreciated.
N. A. Chew, Frinton, Essex

Firstly, the difference between the Xtra-RAM and the Xtra-RAM Deluxe is the board. They are both virtually identical to fit, but the Deluxe board takes SIMMs (Single In-line Memory Modules) boards to upgrade, whereas the ordinary board takes RAM chips. The advantage of the SIMMS method is that you can have various configurations of RAM on it. You can upgrade to 2.5 megabytes by adding two 1 Meg boards and then on to 4 Megs by adding two more. The ordinary board will only go to 2 megs on board, giving a maximum of 2.5 Meg.

You only get 2.5 megabytes when you upgrade because in order to address the extra two Megs on the board, you have to put to sleep half a Meg of RAM in your machine. Therefore you lose half a Meg.
If you can, go for the Deluxe board. That way, you can take the memory with you if you upgrade to an STE later on.

AMATEUR RADIO BUFFS ON THE ST



I'm having a problem using the RS232 port on my ST. I'm a radio amateur, and I use my machine to run packet radio. The problem is that the software requires RTS/CTS handshaking, and my computer bombs and won't run. Can you help? I'm running a 1040 STFM with a Power 40MB hard drive. The software is called ***Amterm***.
Gary Beech, Woodford, London

The problem is almost certainly the normal one when using the RS232 port. Some versions of TOS have a bug in them that will not allow RTS/CTS handshaking. This is one of the problems with TOS 1.0, for example. There are patch programs that you can add to your AUTO folder that will cure the fault and enable you to run Amterm perfectly well. I, myself am a radio ham, and I use Amterm V4.02. The patch program I use is called TURBOCTS.PRG by Bill Penner which should be available from all good PD libraries. There are other patches available for the later TOS versions. The problem went away with TOS 1.4 but has now re-emerged.

FASTER MICE

Thanks for making the new magazine even better, the cover disks last month were really useful.
My problem is that I want to make my mouse go faster. I read your guide to the language, and you mention a mouse accelerator. Can you tell me where I can get one and how much they are.
M Watson, Newquay, Cornwall

I think you may have misunderstood. A mouse accelerator is not hardware, it's software. And to show what a generous lot we are, we've included one on this month's cover disk! Place MACCEL 3 in an auto folder on your boot drive. Then either place MACCEL3.CPX in your CPX folder for use with XCONTROL or run the program again from the desktop to configure the program to your

own requirements. There are three speed settings for the mouse and also a handy screen saver.

LONGER LEADS ON HARD DRIVES?

I have just bought a new hard disk drive and the lead supplied with it to connect it to my computer is too short. This means that I cannot place it where I want. Can you tell me where to get a longer lead. It is very annoying.

Hal Clarke, Macclesfield, Cheshire

Your DMA lead is short for a reason. You don't say which drive you have or where you are trying to put it in relation to your ST, but technically, the shorter the distance between drive and computer, the less the chance of data corruption. So, the best thing to do is to re-arrange your desk so there's no pulling on the lead and place the drive as close as possible. This will reduce the likelihood of data being corrupted.

If you have a question or problem with your ST or any of the hardware or software that you are using with it, then write it down and mail it off to our team of experts right now. We will answer all your questions eventually but our level of mail at the moment is huge, so please bear with us if we don't answer your question immediately.

Send your letter to Ask the Experts, ST Review, 30-32 Farringdon Lane, London EC1R 3AU.

To help make things easier for use, please remember to mark on the outside of your envelope the nature of your enquiry.

VIC LENNARD

Music, MIDI and sound recording.

Our very own technical editor can actually handle most enquiries that you have but as President of the UK MIDI Association, there's no-one more tuned into the ST music scene than him. A wiz with a mixing desk too, he can help with all your musical enquiries from playing music to recording

ANDREW WRIGHT

Non-programming and all your more general problems.

Erstwhile Technical Editor of Atari ST User, Andrew was an obvious choice for our panel of experts. One of the best known all-round technical experts in the ST World (eh?) he can answer all the quirkiest questions that you have.

JOHN MALLINSON

Word Processors, DTP and Printers

If reincarnation is true, then John will no doubt return to this earth in the guise of a laser printer. If you have any problems with your Word Processing, DTP or printing, be it dot matrix, bubblejet, or better, then John will be the answer to your problem.

GARTH SUMPTER

Games and consumer watchdog...

Yes our very own editor will be looking at your consumer problems. Want to know where to get that game or program? Garth will know or can find out. As the consumer watchdog, he can also tell you where to get the product that you want or what to do if you're not satisfied once you've got it.

TONY DILLON

STOS /Graphics

The writer of the STOS tutorial, Tony has already imparted some little gems of information but is still on call to answer all your STOS programing questions and graphics questions.

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DIAL - A - TIP

Cheats, Tips, and Game Solutions

CHEATS GALORE
0891 101 234
MEGATIP GAMESLINE
0891 445 987
ST GAMESTIPS
0891 445 787
SHADOW OF THE BEAST I AND II
BARBARIAN II SOLUTION
0891 442 022
FIRST SAMURAI HELPLINE
0891 445 926
MAGIC POCKETS/RODLAND SOLUTION
0891 445 928
COMPUTER FUNLINE
0891 445 799
WIZZ KIDD COMPUTER QUIZ
0891 101 255
FOR INFORMATION ON ALL OUR HELPLINES
0891 445 904

ALL LINES UPDATED WEEKLY
PROPRIETOR:- Jacquline Wright, Guiding Light Computer Services Limited, PO Box 17, Ashton UnderLyne, Lancs, OL7 0WW
Calls cost 36p per min at 'cheap' rate 48p per min at all other times.

PD AUTHORS SOUGHT

Write a program for our coverdisks and you could earn up to £500 – with a minimum payment of £50 for even the smallest of your best utilities...

If you've written any neat programs, fun games, incredible utilities, or anything that you think other people might want to see, why not turn your hard work into hard cash?

Unlike mags that offer to pay you £1000, we won't promise you the earth, but if we use your programs you may get paid a small fee, and if your work is exceptional you could earn up to £500.

We are interested in seeing anything you've written, so come on, don't hold back. You may not rate your small routine that works out every prime number between one and five, but it could be just what somebody else needs.

We're also interested in seeing any outstanding PD that hasn't already been doing the rounds for years.

Please put your programs etc, onto a standard ST disk. Full documentation should also be included on the disk.

PLEASE NOTE THAT ALL READ-ME FILES MUST BE IN ASCII.

ST REVIEW PROGRAM SUBMISSION FORM

NAME.....

ADRESS.....

.....

.....

.....

PHONE.....

PROGRAM SIZE IN K.....

VERSION OF TOS YOU ARE RUNNING.....

PROGRAM NAME.....

ADDITIONAL FILES REQUIRED BY MAIN PROGRAM

.....

.....

BRIEF SUMMARY OF WHAT MAIN PROGRAM DOES

.....

.....

.....

.....

.....

TYPE OF PROGRAM:

GRAPHICS/MUSIC PACKAGE ☐

GAME ☐

DEMO ☐

PROGRAMMER'S TOOL ☐

PROGRAMMER'S ROUTINE ☐

FUN ☐

OTHER (PLEASE SPECIFY).....

PLEASE ENSURE THAT YOUR DISKS ARE VIRUS FREE AND THAT YOUR NAME, ADDRESS, AND PROGRAM NAME ARE WRITTEN ON THE DISK.

IMPORTANT

You MUST sign this declaration before your programs will be considered: "The above named program(s) are submitted for exclusive publication in ATARI ST REVIEW magazine. It/they are wholly my own work and I agree to indemnify EMAP Images against any possible legal action should copyright problems arise.

SIGNED.....

DATE.....

LETTERS

Here it is once again – the page that you, the readers, write. If you have something that you want to get off your chest, a complaint, a suggestion, or perhaps some constructive criticism about this magazine, however small and insignificant it might seem to you, we want to know about it. Just drop us a line at Points Of View at the usual address. The sender of the best letter will receive £50 worth of software

AMIGA OWNERS CLUB?

You have highlighted the fact that the ST is beginning to be recognised as a serious home computer rather than just a games machine, which is exactly the opposite of the Amiga's latest incarnation.

The A500+ is no longer in production and has now been replaced with the new 600 with its ROM slot. Have you seen the adverts in some ST mags for the new machine? The Computer you always dreamed about is the claim. Too right! The 600 is just the thing to give the ST some credibility back. In the console attack the ST goes serious and the Amiga pretends to be a console.

I think Commodore seem to have missed the point somewhat, though. A console sells for £100 to £150, and the Amiga pretend console for £400. Which would you buy?

An own goal by Commodore, I think, and the home computer market is now a one-horse race if you're at all serious about computing. Nice one Commodore!

Stephen Hards, Mansfield, Notts

It's very easy to knock the Amiga and a lot of ST owners do it. The fact is that they are both capable machines – otherwise they would not sell in the numbers that they have. The ST has always had my support and I vote for it because I believe that it's better for serious applications and it will play games too (Let's be honest, there are few ST owners who can honestly say that they never play games). However, it must be said that the Amiga is good for games playing and is a little bit more versatile than a console. The 600 is a big faux pas as any owner of a Microprose game will tell you. You see, they made it nice and compact, but forgot the numeric keypad, which most Microprose games and many others rely on for extra game control!

My money is on the ST, and the new Falcon 030 machine. Time will tell, but with a well marketed product, we could see the re-emergence of the Atari as a force to be reckoned with.

ST RULES

It's no good, I can't stand it any longer. I just have to get this off my chest. I am angered every time I hear or read of someone comparing the ST to the Amiga and rating the ST as second best. What a load of crap! Don't these people realise that what we have here is probably the most versatile machine available, designed better all round. There's nothing it can't do and in my opinion it does it a lot better than a meagre Amiga. OK, so there are lots more games for the Amiga, big deal. Personally, I think the ST is capable of higher things. I couldn't care less whether there are games for the ST or not, being a graphic designer for 10 years now, and working on my Mac, I know from experience that my ST can't be beat when it comes to true professionalism at an affordable price. Let the games publishers continue to feed the Amiga market with it's kiddie games. I'm sticking to higher things.

Nigel Rowbotham, Lemington Spa, Warwickshire

The point I'd like to make is that the only people who knock the Amiga are ST owners and vice versa. Could this mean that there's a little rivalry out there? Or are both machines just as good as each other, but slightly better in certain areas? The Amiga is slightly better for scrolling games but the imminent release of the Falcon will make Atari THE producers of the highest specification home computer ever. But the argument won't stop there as the A800 has a similar specification but is not due out until early spring. So, the argument will go on for a long, long time.

A KINDLY WORD

In my opinion your articles on the Atari ST are far too limited and I thought you might like some ideas on items to cover. Also you should at least give a bit more coverage to the TT now that Atari has reduced the price. In fact a review of the machine might be useful because I am sure that there are people out there who are not aware of the machine's potential. Anyway, my suggestions are:-

1) The history of software houses such as HiSoft, Gribnif, Compo and Microprose and perhaps the people behind the companies.

2) Coverage of software from the States such as Cardfile3 and Prism Paint

3) How to use some of the Public Domain software; games as well as the serious programs.

4) Overseas news, for example from Germany, USA, France and even Australia.

5) Also offer subscription without the software.

I know that you are only up to issue 3 and the magazine will develop over a period of time but I do not think that Atari ST Review is different enough to the other two major ST magazines. Maybe my ideas are not great but perhaps they will get you thinking a bit harder about the content of future issues.

Jeremy Loudan, Teddington, Middlesex

We try to please everyone with the contents of ST Review and are are always ready to listen to constructive criticism. In fact, some of the things we have already planned for future magazines include some of your suggestions so it's nice to know that we're on the right track. In the meantime, if anyone has their own ideas that they'd like to share with us then let us know. After all, it's YOUR magazine.

DISK DRIVE DRAMA

I have had my trusty 520 STFM for 3 years now. All of a sudden the desktop has gone crazy. I have been getting messages like 1957003775 bytes used in 3726580 items and all the files are coded e.g. /a" *. Does this mean I will need a new disk drive? I read the feature about changing the disk drive in the July issue and noticed there are two different drives. I have an STFM but my disk drive has been shaped like an STE's ever since I bought it. Does the disk drive with the large eject button only apply to the STF and the 1040 STFM.

I have heard Atari are to launch a new console, it has currently been codenamed Jaguar and it is to be a 32bit machine. Will this be a computer or a console like the Megadrive and will it contend with Matsushiros latest 32bit machine? In my view I don't think that the new Falcon should be released because the ST already beats the Amiga 600. Many people buy Amigas because of the crap that is said about them, like 1Mb of memory, WOW!! Bart Simpson game, GOSH!! Some of my friends have got an Amiga just for the games that come with them. I like the ST's basic approach to computing and budget games, which is why I bought an ST. I borrowed an Amiga 600 for a week and was thoroughly disappointed. When I got back to my beloved ST, I was told coffee had been spilt over the keyboard and the badge had fallen off! The Amiga owner said he couldn't use it! I have cleaned the keyboard up but the disk drive won't work. Can you suggest a good 720k internal disk drive?

I wish you the greatest of success with the Falcon.

C.Bradley, Wakefield, West Yorks

The problem could well be with your drive. They are not really designed to drink coffee! Take a look at issue three for a review on floppy drives including a step-by-step guide to installing a new one. It was actually written with an upgrade from a

single sided drive in mind, but it is equally applicable to you. As for the variation in buttons, these are not necessarily STE or STFM specific. Merely down to what drive Atari used at the particular time of manufacture. There is no official word as yet with regards to the Jaguar, save to say that it looks like being a spectacular machine. Watch out for the new Lynx package with BATMAN RETURNS.

AMAZING AMIGA

What a load of bull you publish in your magazine! The article on upgrading disk drives was rubbish, what did you use to cut the hole in the case with, a tin-opener!

How rash can you get? Who is this idiot Martin Wilson? He states that he owns both an Amiga and an ST, that the ST GEM operating system is better than the Amiga ***Workbench***. Having owned an ST in the past I can say that ***Workbench*** is far superior, far more customisable and friendly. To say that the ST can have more memory is also utter rubbish. The Amiga Plus can be upgraded to 10 Meg of ram by using boards that plug into the side of the expansion port or the trap door expansion slot. As I remember the ST is limited to 4 Meg of ram. He will also find if he used original software on his machine that he would not need his ROM switcher. I upgraded my Amiga 1500 to Kickstart 2.0 and found only Gajits 4d companion would not run, the manufacturers of which I can say kindly sent me a free upgrade which now runs faultlessly. You can't put an Amiga to serious use?, what nonsense. How much does Calamus cost on an ST, you can buy better DTP programs on the Amiga and at less than £150.00. Can you buy a Genlock for the ST for under £100?, not a chance, but you can on the Amiga. Can you but a 3D modelling program as powerful as Imagine 2.0 on the ST?, again not a chance. If the ST is so wonderful why is the majority of ST Review devoted to games? So go ahead and use your ST seriously. AS A DOOR STOP!!

S.Whalley, Deeside, Clwyd

Yes, well. It's easy to knock the ST. If I really wanted to, I'm sure I could totally destroy the Amiga, the PC, the Apple Mac and any other machine on the market! The bottom line is that there are positive and negative points to each and every computer, no matter how good or bad it is. As for the case on the floppy drive upgrade, it was done like that on purpose to show what a REAL job is likely to look like. We've all seen the professional finished projects and tried to copy them. The end product bears no resemblance to the photos! At least with ours, you have a fair idea of what it'll look like in the real world. Also the majority of the magazine is devoted to things other than games – less than 25 per cent of the editorial pages cover game reviews. Lastly, your strange hatred of the ST is only mirrored by your strange propensity to read ST mags.

GET PUBLISHED

I am writing to ask if you could possibly help us out by printing this letter in your magazine.

Myself and several friends are currently compiling a book of tips for Atari ST games. We have got about 300 but could do with a lot more.

So if your readers could help by sending us their tips, cheats, maps, hints and level codes (please, no Lemmings!), it would be greatly appreciated. All tips printed in the book will be acknowledged with the name and city of the sender being printed.

I would just like to add that your magazine has so far been very good but the disks could do with a bit more on them (PD maybe?). I look forward to your response.

Keith Dunn, Coventry

We are always looking out for games tips ourselves. If any are received, we'll publish them as soon as possible . The problem with a book of tips is that many are published in magazines and people tend to keep back issues and search through them for whatever tip they need. We also offer prizes for the tips we get! I wish you luck in you venture.

On the subject of the cover disks, we always try and give as much as we can, and this month we've given you no less than 22 programs! I think this represents the best value around, and I think we've managed to cater for all tastes and needs.

BACK ISSUES

A few weeks ago I placed an order for your magazine with my local newsagent. May I say how much I enjoyed the issues I have.

They are well written and laid out for people like me (in more mature years) who can find it difficult to understand a lot about computing.

Unfortunately, whereas the magazine is great, I have one minus point to make.

Following the ***STOS*** articles in issues two and three, I tried to obtain issue one some weeks ago to complete the set and was told by your back issues department, to my amazement, that issue one was out of stock.

Incredible, after only three months. I now have the ***STOS*** series which is really useless to me without issue one. Disappointed, to say the least.

Any suggestions?

I'm sorry but we don't have any copies spare lying around that we could let you have. It's a problem that when a magazine as popular as we are hits the newsstands, it tends to sell out very quickly. We've photocopied the article however, (yes, we REALLY haven't got any spare copies at all), and have sent the pages to you to avoid any further disappointment. In the meantime, it may be well worth your while to take out a subscription to be sure of your copy each month.

FRENCH SOFTWARE

I recently purchased the twin pack ***First Samurai/Megalomania*** from a not too local computer store as all the local shops in our area seem to be shying away from the ST and turning to the (shock, horror) Amiga.

After playing ***First Samurai*** for a while, and I might add, enjoying myself, I started to run ***Megalomania***. I was quite enjoying this as well, when the thing spoke to me. Not being too fluent in foreign languages I thought it the usual abysmal attempt at using the sound chip on board. I was further surprised, or should I say shocked, to find that when I had the HELP option enabled, it was all in FRENCH!!

So I wrote, cap in hand, to Mirrorsoft, the publishing company, only to receive a letter from a firm of accountants telling me that the said company had gone into liquidation before Christmas.

I know you are probably going to tell me to take it to the point of sale, but that is no longer possible as we've moved. Any help you could give me would go down a storm - even if it was the address of Ubisoft who are marketing the twin pack. I can't find their address anywhere.

As a footnote to this query, can anyone explain to me why shops are no longer stocking ST software? It isn't because there is no demand as we've just started a user group at work as there are so many of us. So, if any shop owners are reading this, get some ST titles in PLEEEEEESE!

C. A. Penny, Oakham, Leics

The rights to Megalomania were bought by Acclaim, so if you contact them on 0264 738030, I'm sure that they'll be able to let you have the English version.

If more people were to go in to dealers to buy software, we may not have the situation of disappearing shelf space. There are many people in the same boat as yourself. We need to show the dealers that we are prepared to support the ST and spend money in their shops. After all, that's what it's all about, money! If we can prove that it's profitable for them to stock ST titles, they will.

KNOCK ON PUSHOVER

Anyone who has run the ***Pushover*** demo on the coverdisk of issue two will have noticed that the three levels selectable for manual play are different from those used by the automated demonstration. It is possible to exchange them round so that you can play the demo levels and watch the manual ones.

First copy the contents of the PUSHOVER directory on to a fresh disk - there's no point in taking chances! In the SCREENS folder you will see some files called P00001.SCR through to P00006.SCR - the first three are manual level and the rest, the demo. Rename the first three levels giving them temporary names (e.g. P00001.SCX, etc.) and then change the last three so that they have the original names of the first three. Next, rename the first three again with the original names of the last three.

When you now run PUSHOVER.PRG you will see that pressing 1 to 3 will allow you to play the previously automated levels and pressing D will automate the previously manual levels - the solutions to the puzzles appear to be stored within the files.

Ian Abbott, Didsbury, Manchester

Well, thanks for that Ian. I got lost quite early on, but I'm sure you gamers will be able to tinker about and have more levels to play. I'm sure it's easier to go out and buy the game itself! Heed the warning about moving everything to a new disk so that if you make a mistake, you can rectify it easily. It's not hard to destroy a program when you're messing around with files!

KINGS QUEST IV HELP

I am writing to you for some help on a rather good game called ***Kings Quest IV***. I have had the game for six months and have some difficulty in completing it. Having reached the point of being swallowed by the whale, I've tried to tickle it with the feather, but cannot reach its tonsils. Could you either send me the complete solution or at least a way of escaping in the near future. Could you also tell me when Player Manager II is due to be released as I have been waiting expectedly for ages.

Richard Taylor, Sale, Cheshire

If anyone has any tips for King's Quest IV then send them in and we'll forward them on to RIchard. If you have any other tips, then why not send them into GAMES TIPS – there's a £50 prize for the best tips or solution sent in each month!

CHARTS

Punter Power! We give you the guidelines, but what you buy decides which programs and peripherals are the best. Here's what ST owners are buying this month. . .

FULL-PRICE GAMES

	PACKAGE	SUPPLIER	PRICE
1	Sensible Soccer	Renegade	£25.99
2	Knight of the Sky	Microprose	£34.99
3	Grand Prix	Microprose	£34.99
4	Parasol Stars	Ocean	£25.99
5	Addams Family	Ocean	£25.99
6	Bitmap Collection	Renegade	£25.99
7	Graham Taylor Soccer Manager	Krisalis	£25.99
8	A320 Airbus	Thalion	£34.99
9	Microprose Golf	Microprose	£34.99
10	Populous 2 (1 meg)	Electronic Arts	£25.99
11	Another World	US Gold	£29.99
12	Harlequin	Gremlin	£25.99
13	Legend	Mindscape	£29.99
14	Epic	Ocean	£29.99
15	Pacific Islands	Empire	£29.99
16	Oh No More Lemmings	Psygnosis	£25.99
17	Video Kid	Gremlin	£25.99
18	Midwinter 2	Microprose	£34.99
19	Titus The Fox	Titus	£25.99
20	F15 Strike Eagle 2	Microprose	£34.99

OTHER UTILITIES

	PACKAGE	SUPPLIER	PRICE
1	STOS 3D	Europress	£34.99
2	Deluxe Paint	Electronic Arts	£49.99
3	STOS Compiler	Europress	£24.99
4	3D Construction Set	Domark	£49.99
5	Master Sound	Microdeal	£39.99

BUDGET GAMES

1	Pang	Hit Squad	£7.99
2	Panza Kick Boxing	Kixx	£7.99
3	1st Division Manager	Codemasters	£7.99
4	Rainbow Islands	Hit Squad	£7.99
5	Battle Chess	Star Performers	£10.99
6	Italia '90	Tronix	£9.99
7	New Zealand Story	Hit Squad	£7.99
8	Emlyn Hughes Soccer	Touchdown	£9.99
9	Turrican 2	Kixx	£7.99
10	Ultima Golf	GBH	£9.99
11	Rick Dangerous	Kixx	£7.99
12	Robocop	Hit Squad	£7.99
13	Bubble Bobble	Hit Squad	£7.99
14	F15 Combat Pilot	Action 16	£9.99
15	James Pond	GBH	£7.99
16	Man Utd	GBH	£9.99
17	Int. Karate +	Hit Squad	£7.99
18	Shadow Warrior	Hit Squad	£7.99
19	Treasure Island Dizzy	Codemasters	£6.99
20	Stunt Car Racer	Kixx	£7.99

EDUCATION – TOP 5

	PACKAGE	SUPPLIER	PRICE
1	Funschool 4 5 yrs	Europress	£24.99
2	Funschool 4 7-11 yrs	Europress	£24.99
3	Play & Read	Prisma	£24.99
4	Thomas the Tank Engine	Alternative	£24.99
5	Donald's Alphabet Chase	Infogrames	£24.99

LANGUAGES – TOP 5

	PACKAGE	SUPPLIER	PRICE
1	STOS 3D	Europress	£34.99
2	STOS	Europress	£29.99
3	3D Construction Set	Domark	£39.99
4	STOS Compiler	Europress	£20.99
5	HiSoft C	Hisoft	£59.95

National charts supplied by Microbyte.

LEARN THE LINGO

This month we've featured hard disk drives, monitors and mice in our main round-ups, so here are some common terms associated with them and more. . .

ACCESSORY
A program loaded into the ST (usually on power-up), which can then be used whenever needed by pulling down the menu bar at the top of the main screen.

Used for many reasons, usually when you need to be able to perform functions from within other programs. Examples include clock, calendar, notes, ramdisk and many others. These are placed in the root directory of your boot disk (usually drive C on a hard drive) and will load automatically.

BACKUP
It is important to back up your hard disk regularly. That way, if you have any problems, you can restore saved data and programs from your floppy disks.

CONTROL PANEL
An accessory program that will enable you to configure your working environment to suit your own preferences. This includes screen colours, resolution, mouse double click and response, bell sounds and keyclicks. On this month's cover disk, we have included the latest control panel from Atari, XControl, which gives even greater flexiblilty.

DMA
Direct Memory Access. The port on the back of the ST used for connecting a hard disk drive.

ERROR MESSAGES
A common occurrence on the ST. Not very well documented, error messages occur when something is wrong. It may not be a complete disaster. For example, an 'out of memory' message may be cured by removing some accessories at boot-up.

FUNCTION KEYS
A series of keys along the top of the ST which can be programmed to provide necessary functions in particular programs.

GEM
Stands for Graphics Environment Manager. The standard ST desktop, which uses a 'WIMP' (Windows, Icons, Mouse, Pointer) method to make the ST user friendly!

HARD DISK
An alternative method of loading a program into your ST. It has a larger capacity and is faster than the floppy drive built into your ST, but less portable and more expensive. It achieves this by spinning over 10 times faster than a floppy disk and having the heads closer to the surface of the disk itself. Because it is sealed and does not need to worry about dust and dirt particles getting between the heads and the surface, it can spin faster giving high data transfer rates.

ICONS
The pictures that depict the programs and files in the windows and the drives and trashcan on the desktop are known as Icons.

JOYSTICK
A method of controlling movement on the screen, usually used for games playing.

KEYBOARD
All of the keys on the machine. Layout is standard "QWERTY" with extras.

LASER PRINTER
Fast, high-quality printer giving very good printing results using laser technology.

MOUSE
A "point and click" method of controlling the GEM environment. If the mouse is faulty, the functions can be emulated by holding down the ALTERNATE key and using the arrow keys. The left mouse button is duplicated with ALT - INSERT.

NETWORKING
Connecting your ST to a friend's using a lead is a simple form of Networking, using one machine to control or serve others.

OUTPUT
A term used to describe what is sent to a printer or other device. For example "The OUTPUT is sent to the printer".

PIXEL
The small dots on your screen are called pixels. They are the smallest display units that your ST can handle in each graphics mode. Usually, the higher the number, the greater the resolution, given in dots per inch (dpi).

QUIT
The command used by a lot of programs to exit.

RF MODULATOR
RF stands for radio frequency and the modulator transforms the video (RGB) output from the computer into a signal that can be picked up by a television receiver. Allows the use of a normal TV.

SCART SOCKET
The standard 21-pin Peritel socket on the back of a television set that can be used to connect the ST without having to go through the RF modulator. Gives a cleaner picture, but still not quite as good as a dedicated monitor.

TURTLE
A commonly used PD backup program. Very fast and powerful.

USER
That's you!

VDU
Visual Display Unit – in other words, a monitor or TV.

WORD PROCESSING
This is the equivalent of a typewriter on the ST. Allows you to lay out you letter properly before printing for best results. This is made easier to use with a hard drive. First Word Plus, on the cover disk this month, is probably one of the best around.

X-CONTROL
Atari's new fully configurable Control Panel. Allows you to edit the environment for comfort in terms of colour, mouse response, keyclicks, bell and other options. This panel can also be used to configure other programs using files called CPXs.

A chance to try it for yourself is included on this month's cover disk. See page 26.

Ok, so I ran out when I got to Y and Z. Can you think of anything to fill them? Some top software to the sender of the best suggestions. Send them to Y & Z, at our usual address.

RAMDISK
On our cover disks, you'll have noticed the use of a ramdisk. This is to make your life a bit easier when de-compacting all the programs. The reason we use this method is that we can make the disks even better value by putting more on them.

They work by giving an area of RAM the characteristics of a disk drive. The one on out disk gives you a 350k ramdisk and calls it drive P. You can use it as a normal disk drive, but you won't have much memory left to run any programs in it's current form (about 15k left on a 520 machine). The important thing to remember is that anything in the ramdisk will be lost when the power is turned off, so you must copy what you need onto another disk BEFORE YOU SWITCH OFF!

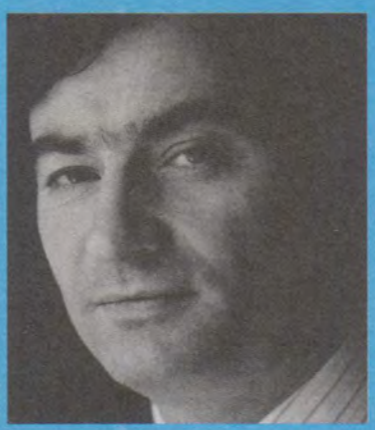
When you boot up a cover disk, it will automatically set up the ramdisk. To stop this, simply delete the AUTO folder on the disk, and it will run as normal.

Wherever there is news, wherever there is controversy, there will always be opinions. And this is the place to air them. One point of view set against another...

OPINION

A lot of rhetoric has passed about Atari's Falcon – but what are the implications of the machine on the home computer market? As you'd expect, Atari and Commodore both have differing opinions...

IF YOU HAVE AN OPINION THAT YOU WANT AIRED, THEN DROP US A LINE AT: OPINION, ST REVIEW, PRIORY COURT, 30-32 FARRINGDON LANE, LONDON EC1R 3AU



Bob Gleadow – Atari UK's enigmatic Managing Director has no doubts about the market that the Falcon will launch into and the dramatic effect it will have upon it...

THE BEST IS YET TO COME

The Falcon will not only new standards in home computing technology, but will consolidate Atari's position with a high powered, all media machine.

It's difficult to know where to begin when talking about the Falcon and in the space here it's hard to really impress upon people the true significance of the machine. Whilst the Falcon will be compatible with existing ST software, it is with the new software and hardware being developed that the true capabilities of the machine will be realised.

The Falcon is not an Amiga buster. It would be both unfair and inaccurate to compare it to to the A500 or the even its successor. The Falcon is the next generation of home computer, and paves the way in introducing the highest specification available at the price – a fact that software and hardware developers have found virtually irresistible.

The most important thing about the Falcon is undoubtedly the fact that with it, Atari creates a new hardware platform, and sets new, much higher standards for the use of computers in Music, Video and Graphics – standards that other manufacturers will have to emulate in order to survive.

BOB GLEADOW ATARI UK

Kelly Sumner – Recently promoted to Managing Director of Commodore UK. Somewhat ironically, he welcomes the Falcon as bringing competition back into the home computer market...

AMIGA ON FALCON

Commodore's opinion of the Falcon is characteristically cool – but just how much faith can one company put into CD-ROM?

I think that it's a great thing for Atari to update its range; hopefully this machine will make it to the retailer's shelves unlike some previous products like the tablet, notebook and the remarkable CD-ROM initiative announced a couple of years ago.

The Falcon appears to be very much an upgrade and not a revolution for the ST community – judging from some aspects, such as the colour palette, which remains very much in the world of 16-bit computers.

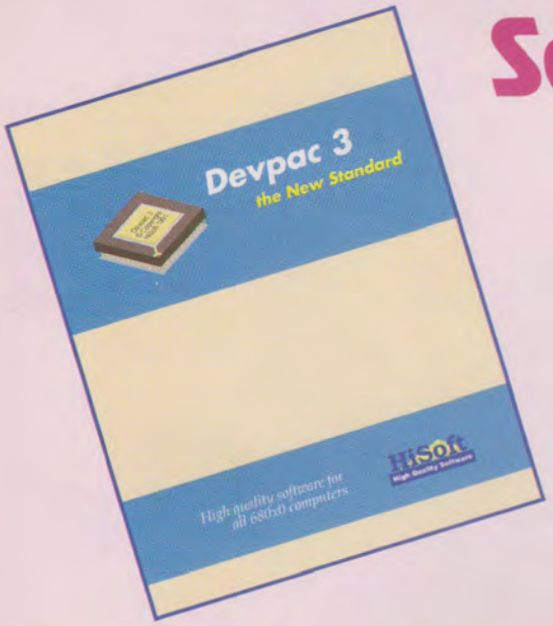
Since the Amiga is unquestioningly established as the UK's premier home computer with over 1.25 million owners, Atari's hopes of success in the market depend on a competitive price point being established for the new machine and crucially the support of software publishers.

As for our future plans for the Amiga, it can only be reaffirmed that Commodore has invested heavily in research and development for the Amiga and I'm absolutely confident that we shall remain the clear market leader.

My most serious doubt is over an absence of any mention of CD-ROM technology – since this, I believe, more than anything else is the technology for the 90s and beyond. However reservations aside, Atari must be congratulated for their aspirations to re-introduce a competitive nature to home computing.

KELLY SUMNER COMMODORE UK

Software that matches the Hardware



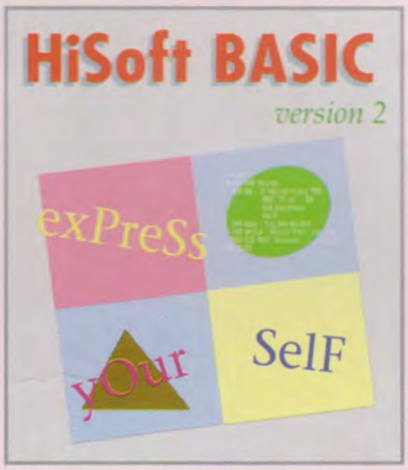
HiSoft is renowned for its range of language systems, utilities and entertainment programs on the Atari ST/STE/TT and, now, the new Falcon. We have been writing for the Atari 680x0 computers since they were first introduced into the UK and thus we know both the hardware and software intimately. Our company policy is always to offer the highest quality software at an affordable price with a complete range of backup support options - in these uncertain, difficult times, we'd like to put a smile on your face.

Here at last ... Devpac 3

Our long-awaited sequel to the popular Devpac 2 assembler package is available at last. The all-new Devpac 3 contains the following major enhancements:

- *brand-new multi-window editor with many user-friendly features*
- *68000-68040, 68881/2, 68851 support*
- *30% faster assembly speed than Devpac 2*
- *many new options and optimisations*
- *new linker (borrowed from Lattice C) giving a much faster link time*
- *improved 680000-68040 debugger with true assembler source level debugging*
- *works on all STs including the new Falcon*

There is much, much more than we can possibly talk about here (a totally new manual for instance) so please write or call for more detail.



The BASIC of the 90s

The only BASIC, of UK origin, for all Atari 680x0 computers that is still being improved and supported.

- *easy-to-use, friendly environment*
- *superb high-level GEM toolkit with source*
- *resource construction set & debugger*
- *super-fast compilation to machine code*
- *extensive, two-volume documentation*
- *works on all STs including the new Falcon*

Diamonds are forever

Awarded a 'Format Gold' rating of 92%, Diamond Back II is *the* back-up program.

- *image or file-by-file back-up, including incremental back-up by date or archive bit*
- *extremely fast with optional compression*
- *load and save customised configurations*
- *flexible disk formatting options with support for high-density drives*
- *clear, helpful user documentation*

Kuma Software from HiSoft

HiSoft is now in charge of the majority of Kuma's software products for the Atari computers; these include K-Spread, K-Word, K-Data, K-Comm and more. Existing users of Kuma software can register for technical support and upgrades from HiSoft by joining our Silver Support scheme (£19.95 inc for life, for all products) - please call or write for a registration card.

***Spreadsheets** - K-Spread 3 has many Lotus-compatible functions (including database/statistical/financial operations), multiple worksheets, date/time calculations, loading of Lotus files, more extensive macro facilities etc. while K-Spread 4 offers all this plus live graphing (line graphs, pie charts etc.), forms design, enhanced sideways printing through GDOS and more.*

Simply no Competition

This latest version of the already massively popular Lattice C 5 package, confirms it as the market leader in ANSI packages for the Atari 680x0 computers.

- *full compatibility with the STE, TT and new Falcon computers*
- *extended and improved editing environment including a brand-new project manager with 'make' facility*
- *easier-to-use and extended options*
- *improved ANSI support*
- *complete range of maths co-processor libraries including auto-detecting*
- *FSM GDOS, CPX & other libraries*
- *faster linker with common block support, support for DRI format*

Please phone or write for upgrade prices from earlier versions of BASIC, Devpac and Lattice C 5

The above is only a small selection of our range of software for the Atari 680x0 computers - other titles include Harlekin 2, KnifeST, WERCS, ProFlight, FTL Modula-2, HiSoft C, Power BASIC, HiSoft FORTH, Wordflair, Tempus 2, K-Word, K-Data and more. All HiSoft software is available from good computer shops - if you have difficulty obtaining our products from your local shop, please give us a call. You can also order our software directly from us, by telephone or by mail, using Mastercard/Access/Visa/Switch/Connect etc. or by simply sending us a cheque/PO. Prices include P&P and VAT within the UK - please enquire about out export terms.

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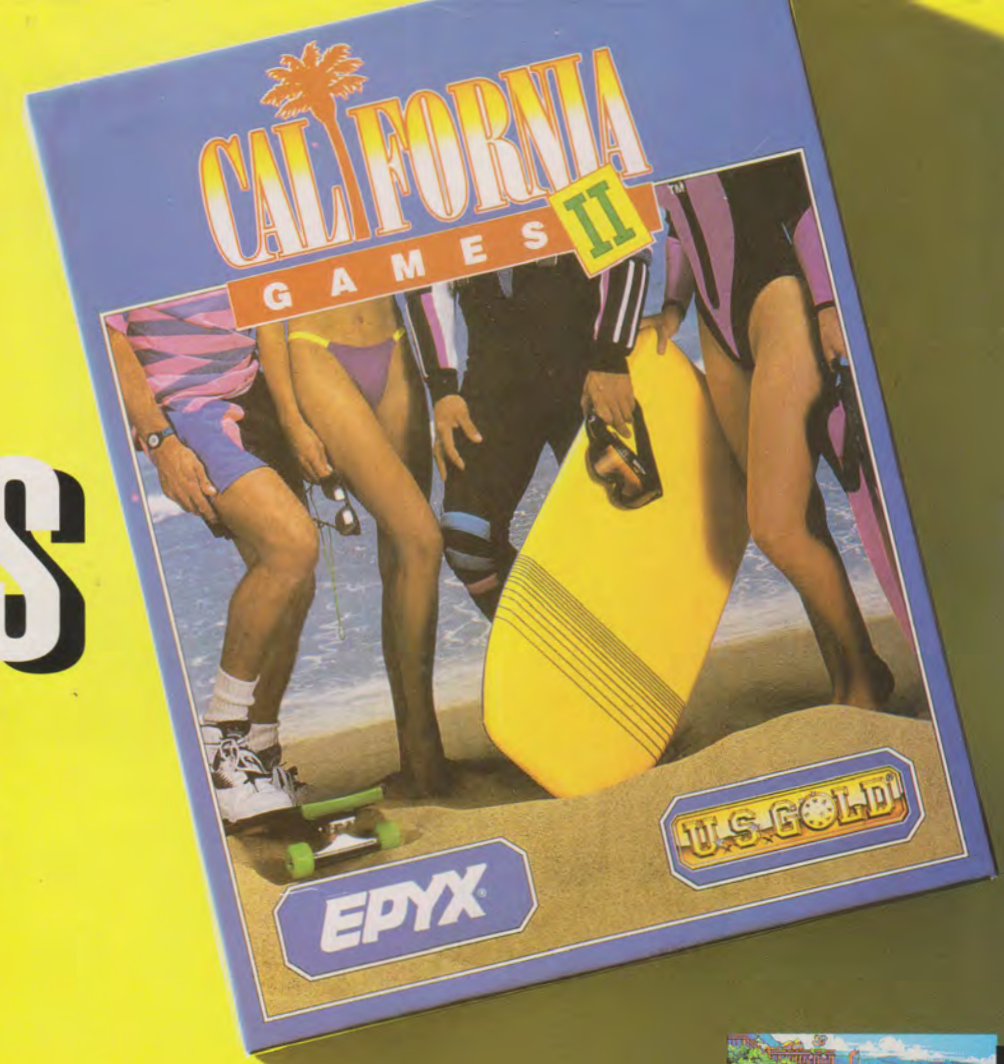

Screen shots from Amiga version

Screen shots are only intended to be illustrative of the gameplay and not the screen graphics which may vary considerably between different formats in quality and appearance and are subject to the computer's specifications.

Yo dudes! Welcome back to California- the land of Fun and Games! - for California Games II, the ultimate sequel to the game that sold over 1.5 million copies worldwide.

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Available on: Atari ST, Amiga and PC Dual.

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